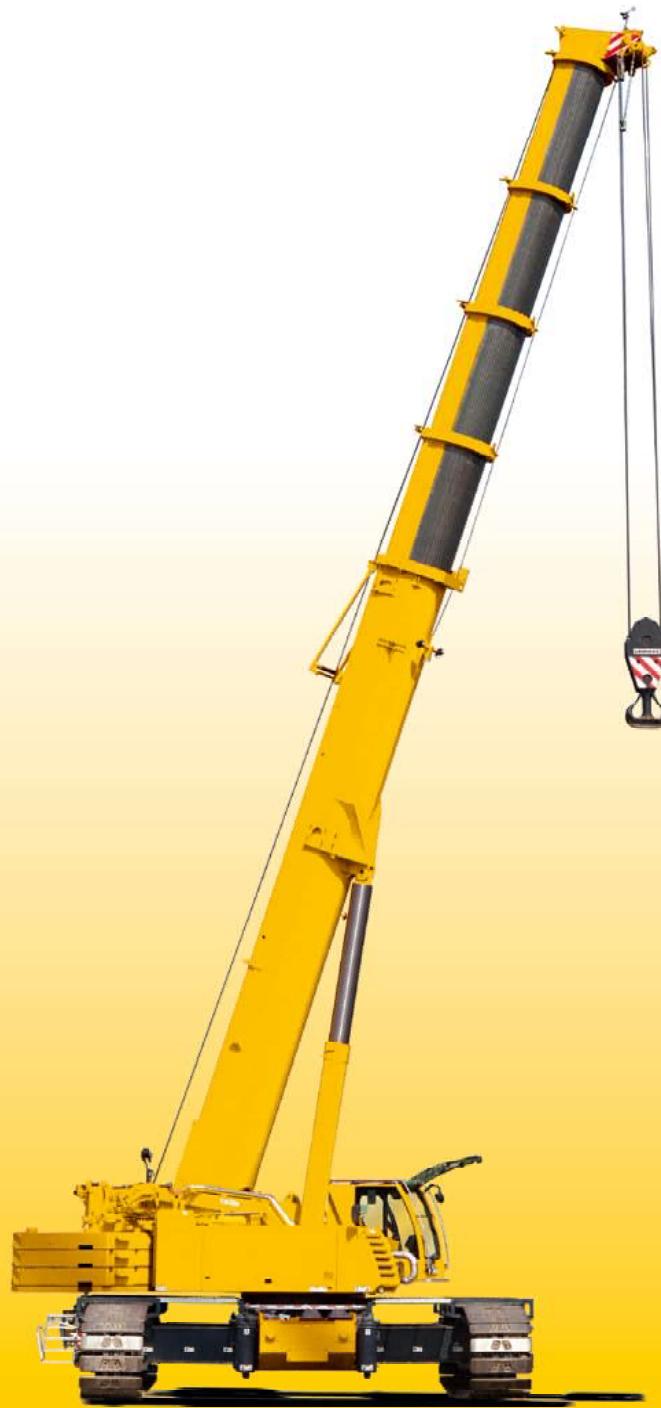


# Telescopic Crawler Crane

**LTR 1220**

## Technical Data



# LIEBHERR

**NESSCAMPBELL**  
CRANE + RIGGING

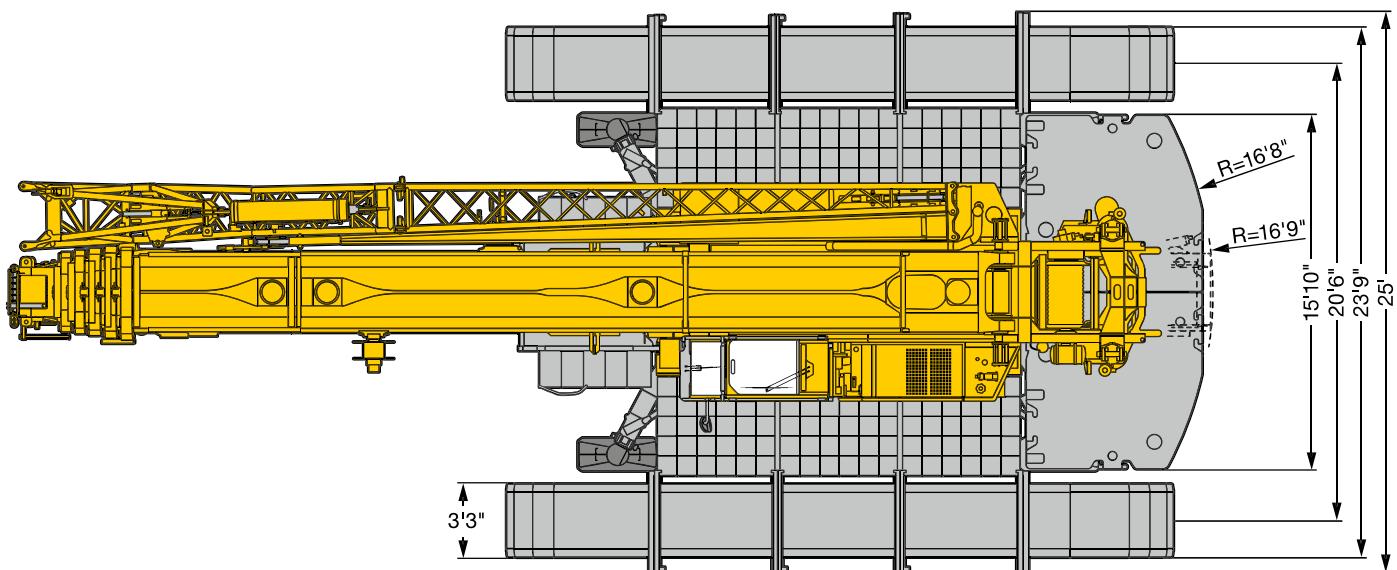
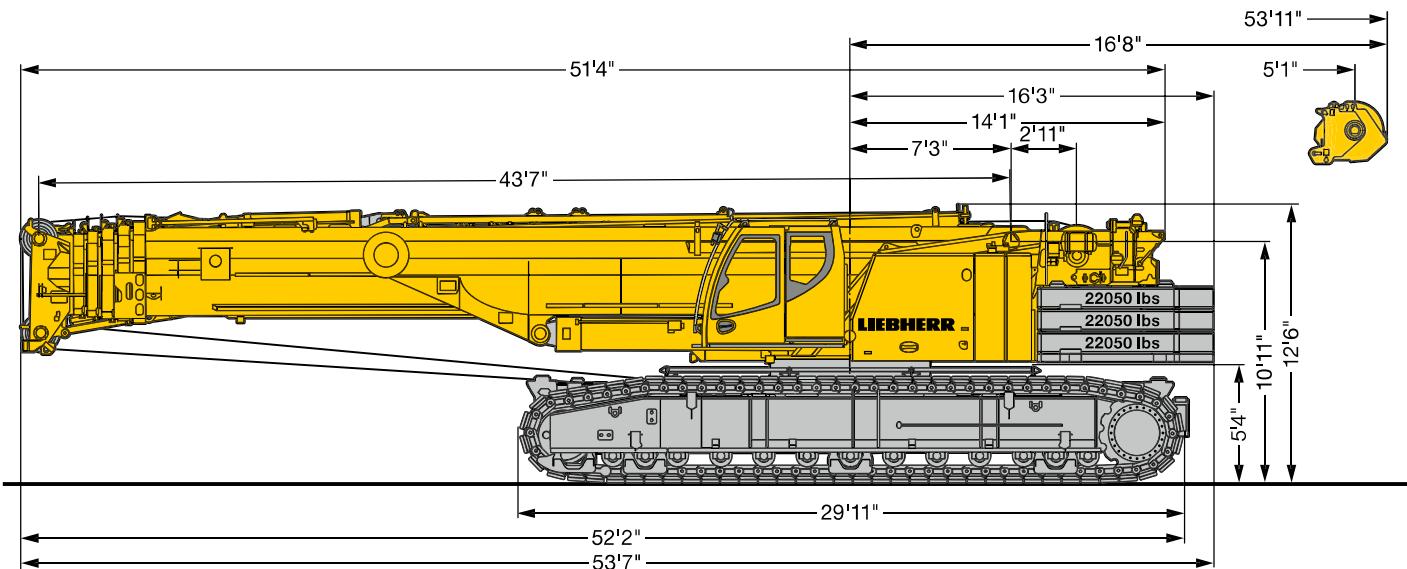
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### **Technical Data Caractéristiques technique**

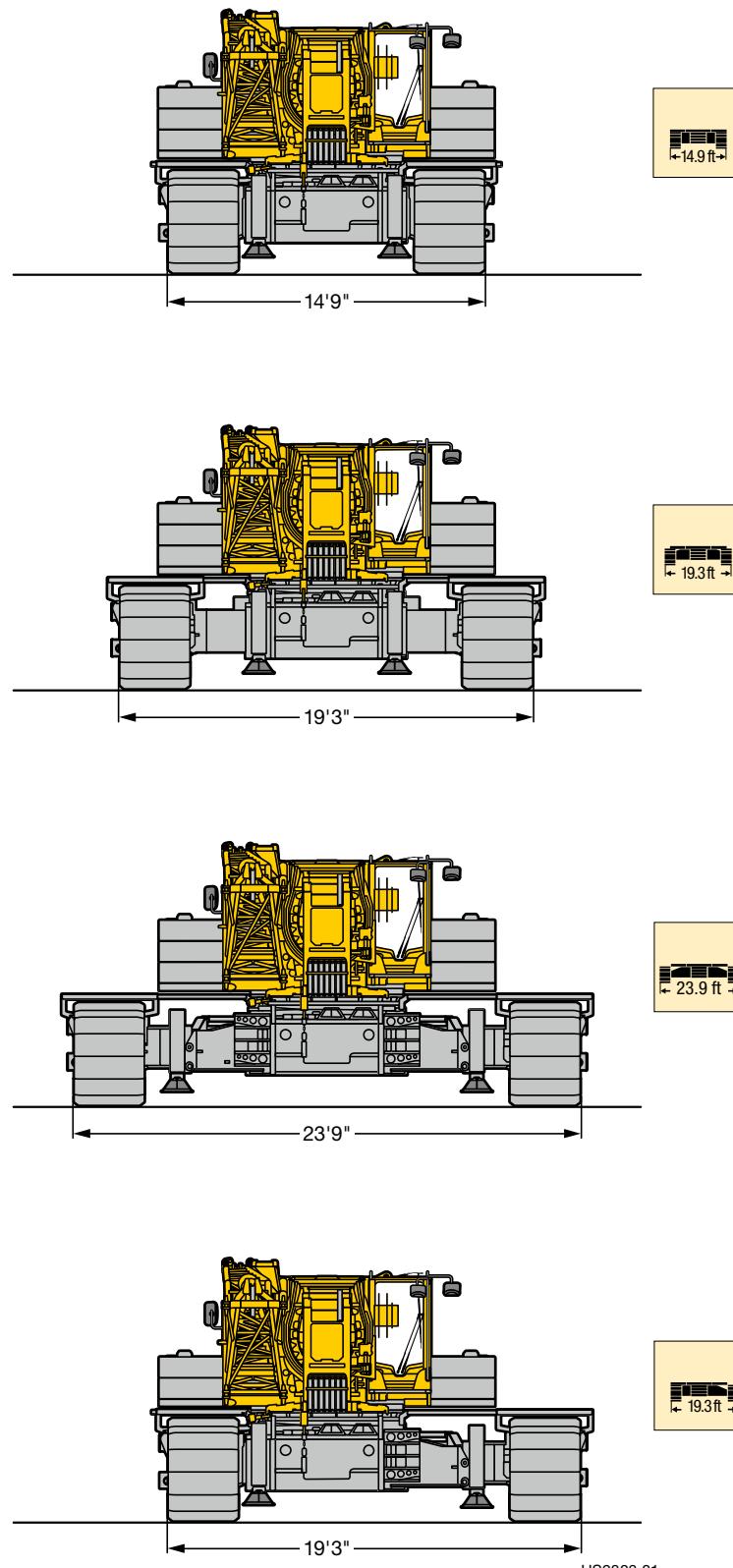
|   |         |
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## Dimensions Encombrement



US2786.01

## Dimensions Encombrement



## Crane data Dates de la grue

|   |  |                              |
|---|--|------------------------------|
|  | Total driving force<br>Puissance propulsive totale   | 254000 lbs                   |
|  | Total weight with 154350 lbs counterweight, 44100 lbs central ballast, 3-sheave hook block and 3.28 ft track pads<br>Poids total avec contre-poids de 154350 lbs, lest central de 44100 lbs, moufle à crochet à 3 poulies et des tuiles de 3.28 ft | ~ 397900 lbs                 |
|  | Average ground pressure without jack-up cylinders at ~397900 lbs total weight and with 3.28 ft track pads<br>Pression au sol moyenne sans vérin Jack-up pour un poids total de ~397900 lbs et des tuiles de 3.28 ft                                | 16.5 lbs / inch <sup>2</sup> |
|  | normal gear · marche normale<br>rapid gear · marche rapide   | 0 – 0.37 mph<br>0 – 1.55 mph |
|  | Max. permissible gradability<br>Pente admissible maxi.   | 47 %                         |

| Load kips<br>Forces de levage kips | No. of sheaves<br>Pouilles | No. of lines<br>Brins | Weight lbs<br>Poids lbs |
|------------------------------------|----------------------------|-----------------------|-------------------------|
| 332.9                              | 9                          | 16                    | 4400                    |
| 314.4                              | 7                          | 15                    | 3300                    |
| 237.4                              | 5                          | 11                    | 2866                    |
| 155.6                              | 3                          | 7                     | 2292                    |
| 68.7                               | 1                          | 3                     | 1851                    |
| 23.1                               | –                          | 1                     | 1102                    |

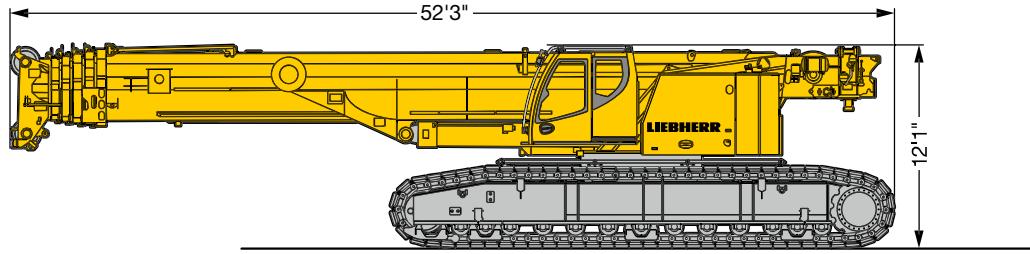
| Drive<br>Mécanismes   | infinitely variable<br>en continu  | Rope diameter / Rope length<br>Diamètre du câble / Longueur du câble | Max. single line pull<br>Effort au brin maxi. |
|---|--|--|---|
|  | 0 – 426 ft/min single line<br>ft/min au brin simple  | 0'9" / 920 ft  | 23605 lbs                                     |
|  | 0 – 426 ft/min single line<br>ft/min au brin simple  | 0'9" / 1150 ft   | 23605 lbs                                     |
|  | 0 – 1.8 rpm  |  |   |
|  | approx. 50 seconds to reach 82° boom angle<br>env. 50 s jusqu'à 82°                                    |  |   |
|  | approx. 420 seconds for boom extension from 44 ft – 197 ft<br>env. 420 s pour passer de 44 ft – 197 ft |  |   |

## Transportation plan Plan de transport

Without slewing platform counterweight and without centre counterweight · Sans contrepoids de la partie tournante et sans contrepoids central

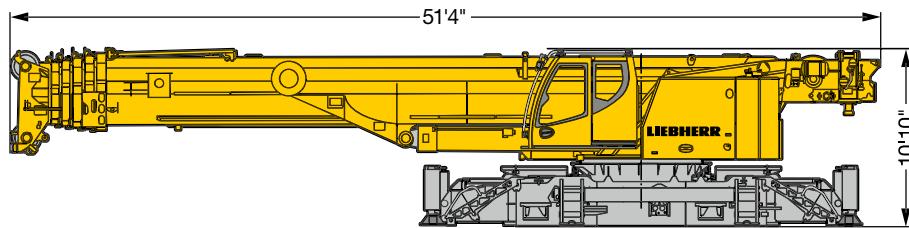
Basic machine, width 16'5", double grouser crawler carrier 3'3"  
Machine de base, largeur 16'5", 2 nervures longerons 3'3"

**203930 lbs**



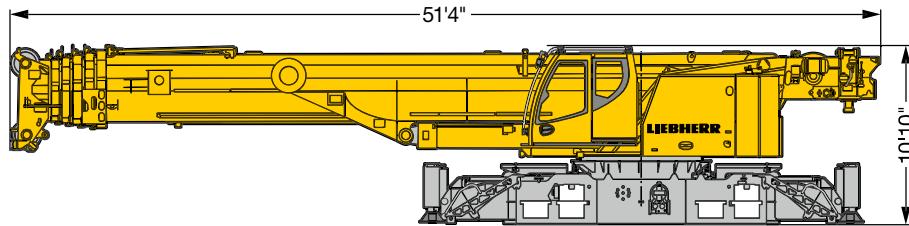
Basic machine, width 9'10", with jack-Up cylinder and traverse beam  
Machine de base, largeur 9'10", avec verin Jack-Up, avec traverse

**121900 lbs**



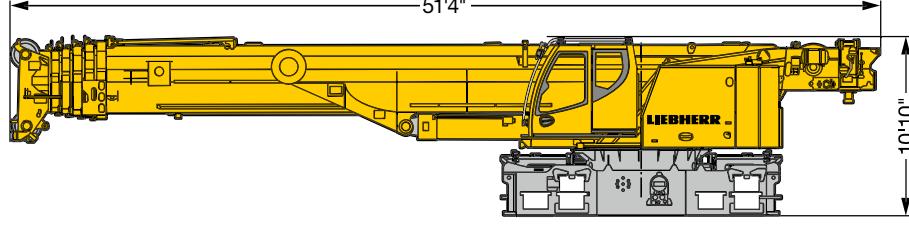
Basic machine, width 9'10", with jack-Up cylinder, without traverse beam  
Machine de base, largeur 9'10" avec verin Jack-Up, sans traverse

**105820 lbs**



Basic machine, width 9'10", without jack-Up cylinder, without traverse beam  
Machine de base, largeur 9'10" sans verin Jack-Up, sans traverse

**99200 lbs**



US2626.02

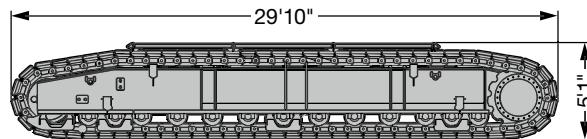
## Transportation plan

### Plan de transport

Crawler carrier, 2 x, 2-bar crawler shoes, width 3'3"  
 Longerons, 2 x, tuiles 2 nervures, largeur 3'3"

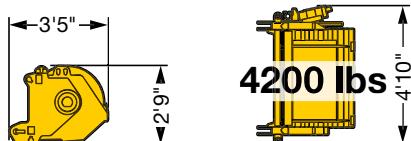
**39500 lbs (2x)**

**41000 lbs (2x)<sup>3)</sup>**



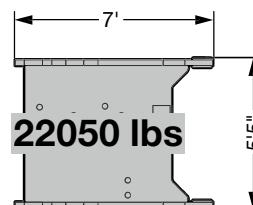
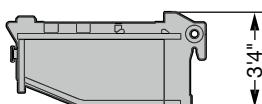
Winch 2 incl. rope  
 Treuil 2 avec câble

**(1x)**



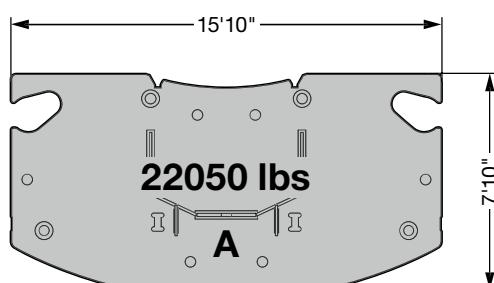
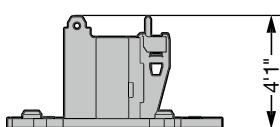
Center counterweight  
 Contrepoids de base

**(2x)**



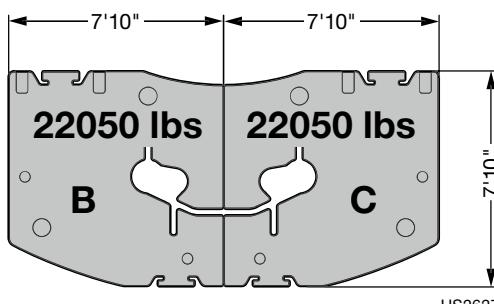
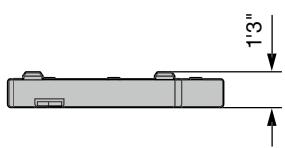
Part A / Partie A  
 Superstructure ballast  
 Contrepoids de la partie tournante

**(1x)**



Part B, C / Partie B, C  
 Superstructure ballast  
 Contrepoids de la partie tournante

**(3x + 3x)**



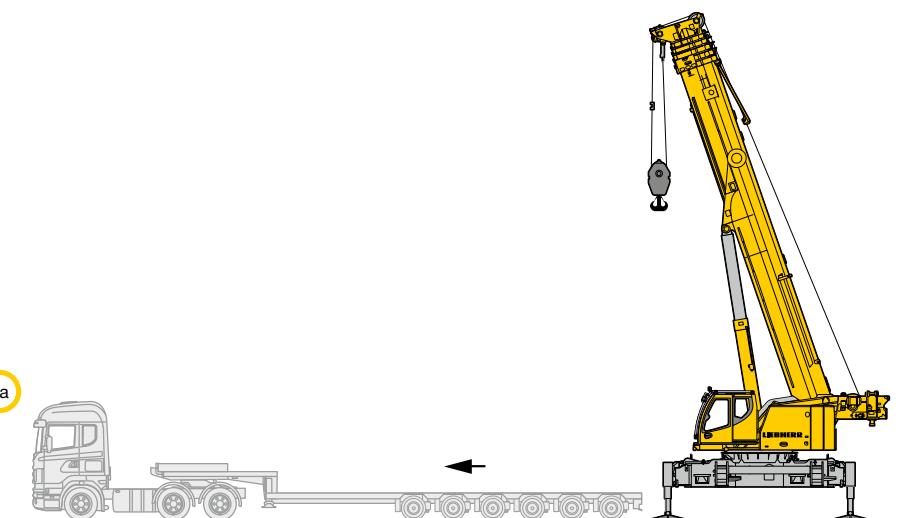
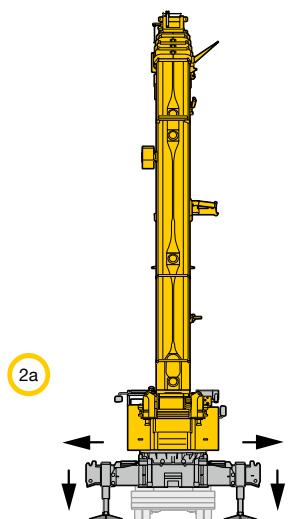
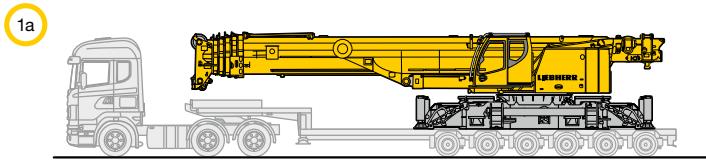
US2627

|                           | Part A / Partie A<br>à 22050 lbs | Part B / Partie B<br>à 22050 lbs | Part C / Partie C<br>à 22050 lbs |
|---------------------------|----------------------------------|----------------------------------|----------------------------------|
| 110250 lbs<br>154350 lbs* | 1 x<br>1 x                       | 2 x<br>3 x                       | 2 x<br>3 x                       |

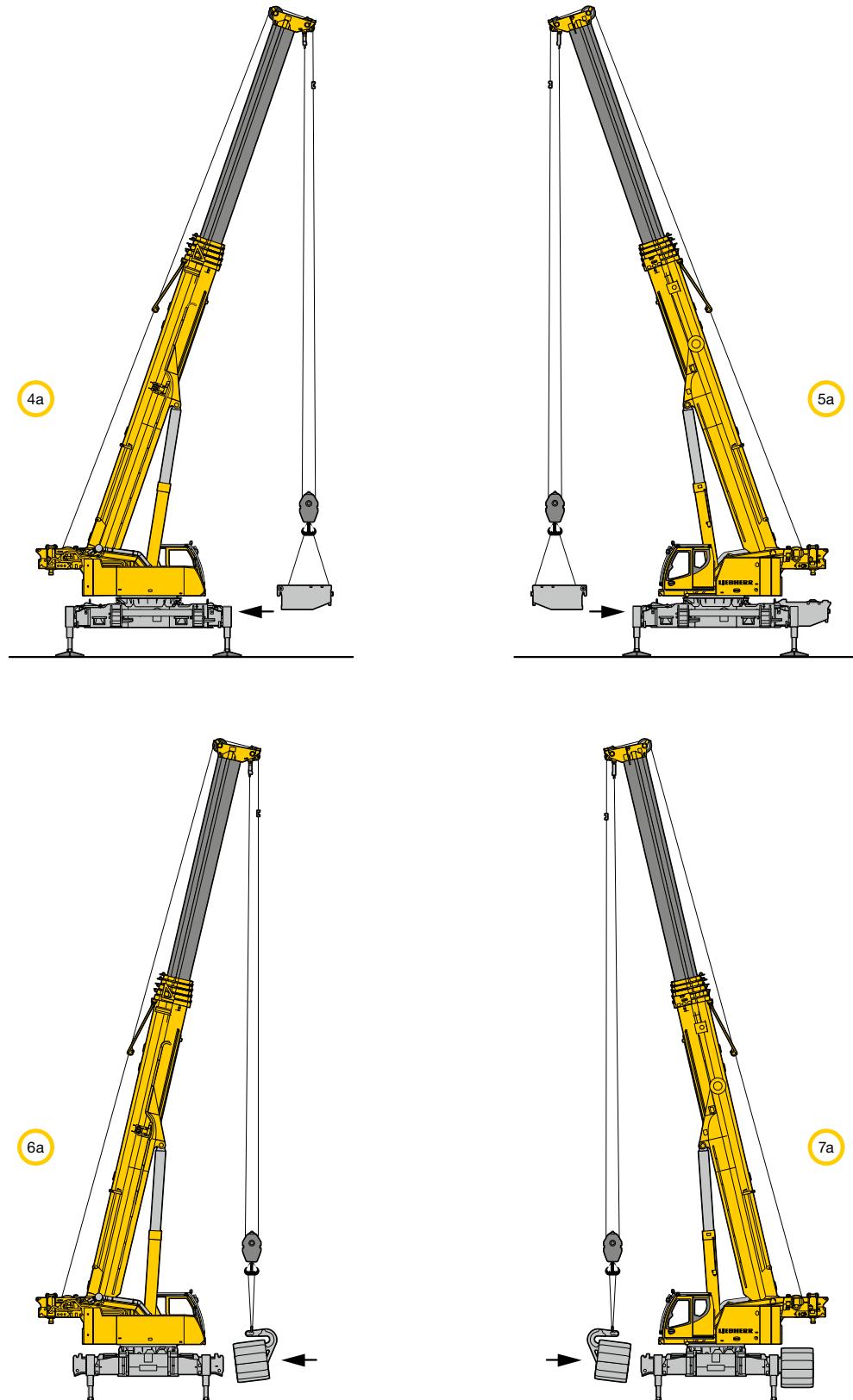
\* optional - en option

## Transportation plan A Plan de transport A

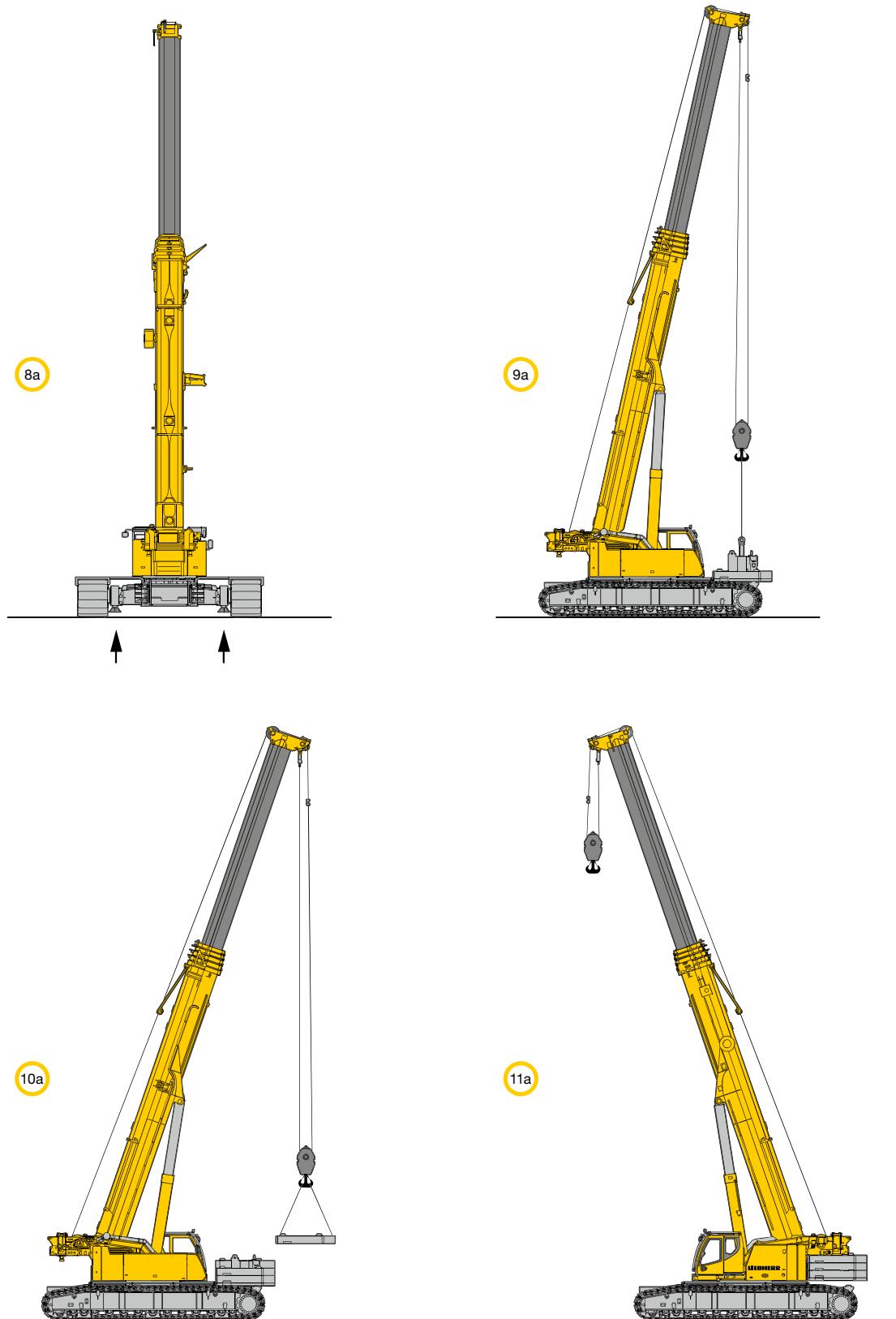
~121250 lbs



## Transportation plan A Plan de transport A



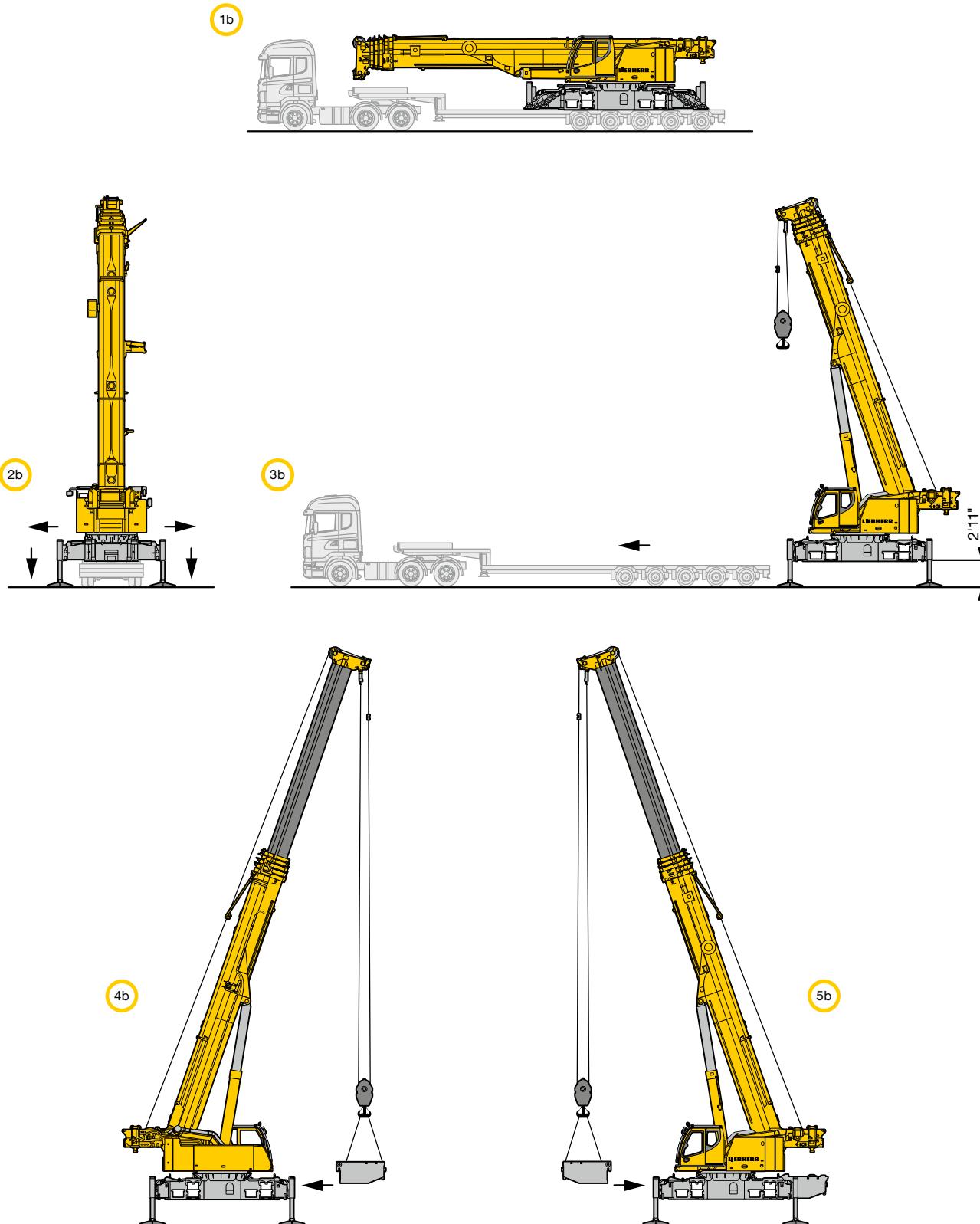
## Transportation plan A Plan de transport A



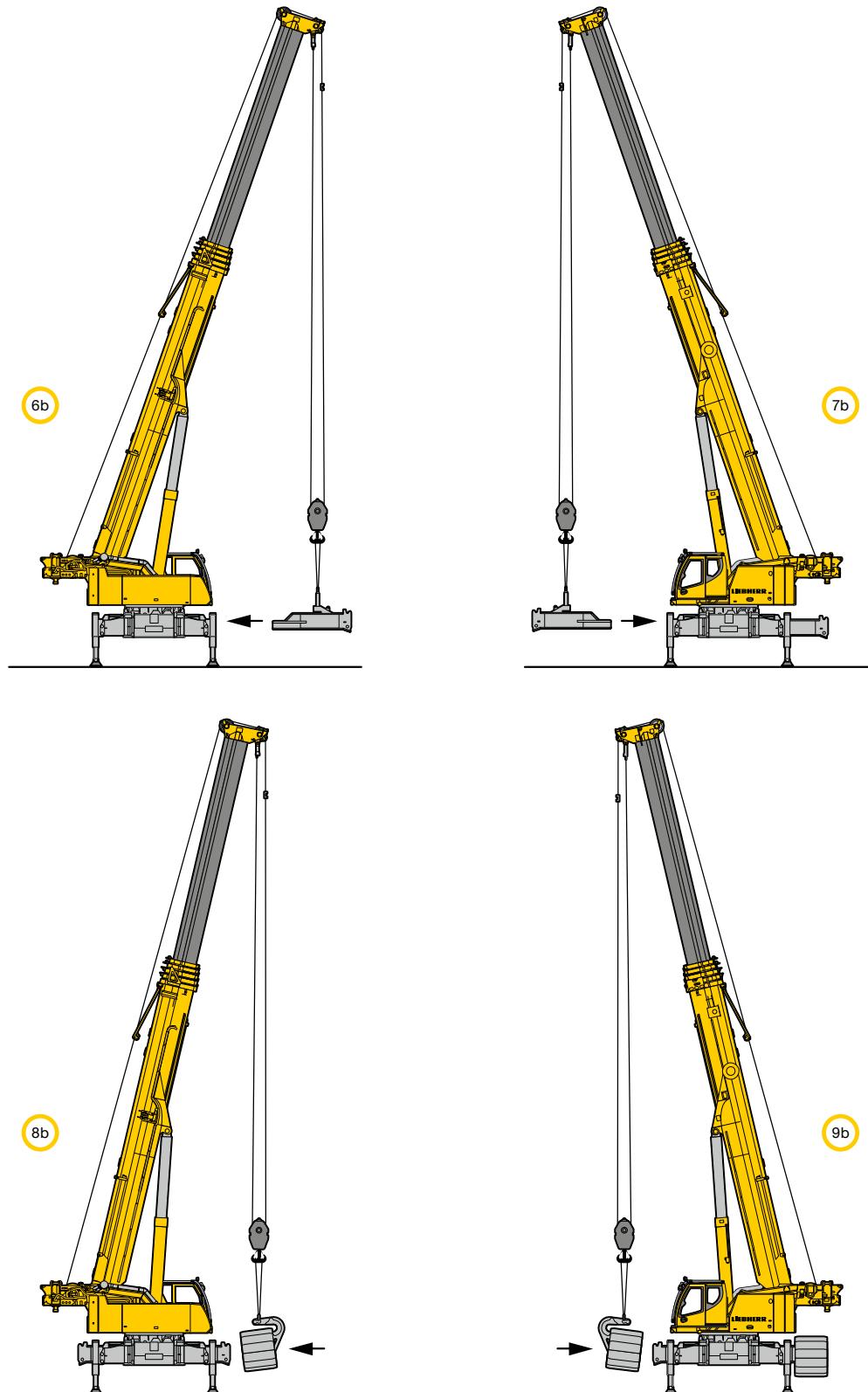
US2628.01

## Transportation plan B Plan de transport B

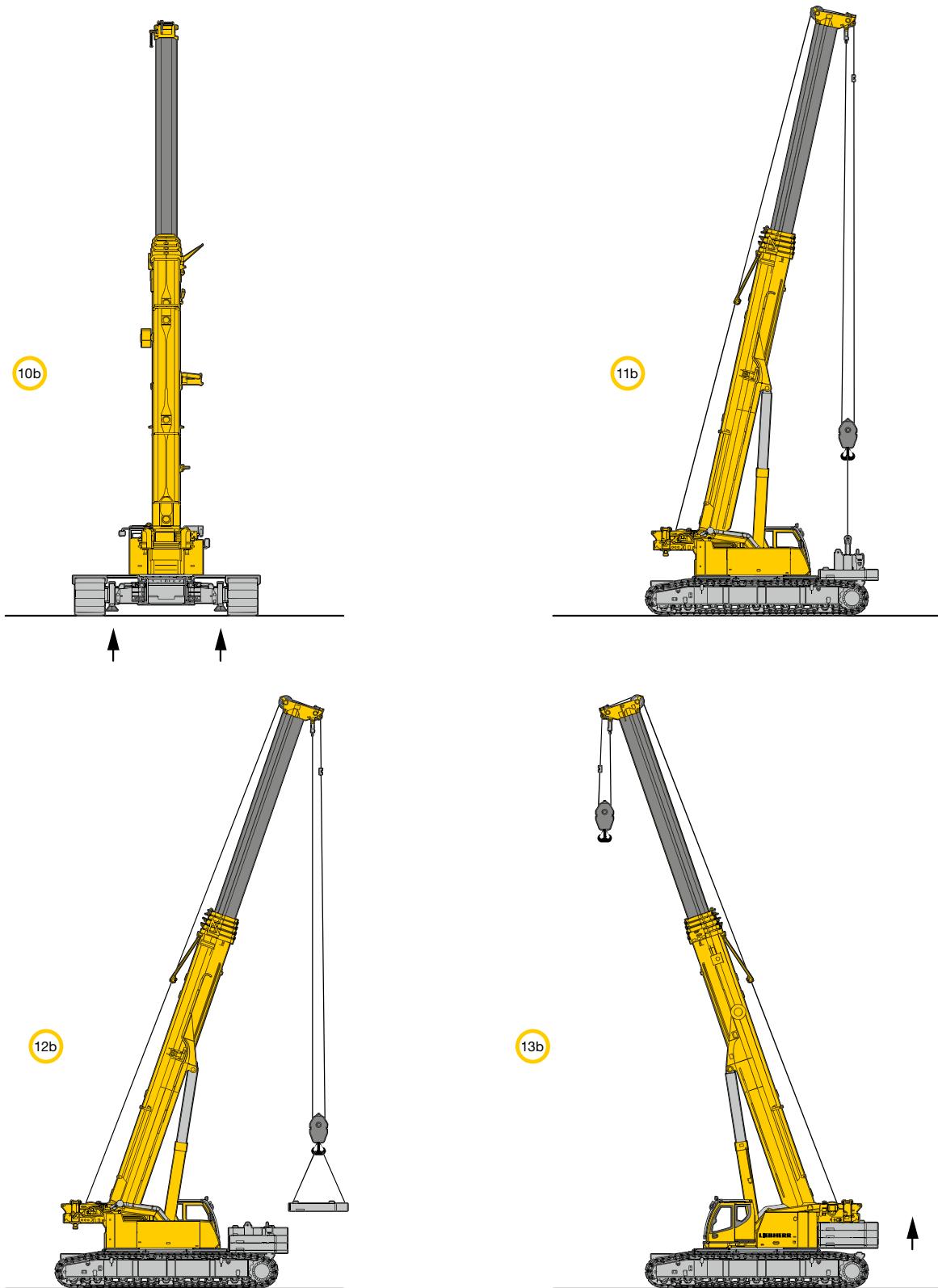
~ 105800 lbs



## Transportation plan B Plan de transport B



## Transportation plan B Plan de transport B



US2762

## Overview of load charts

### Aperçu des tableaux de charge

|  T   |  23.9 ft  |  19.3 ft   |  14.9 ft  |
|---|--|--|--|
| 154350 lbs<br>110230 lbs<br>66100 lbs<br>22050 lbs<br>0 lbs<br>  |  ±10°  |  ±30°    |  ±30°    |
| 0 lbs<br>  |  ±10°  |  ±30°    |  ±30°    |
|  T  HK  |  23.9 ft  |  19.3 ft   |  14.9 ft  |
| 154350 lbs<br>110230 lbs<br>66100 lbs<br>22050 lbs<br>0 lbs<br>  |   |  ±30°    |  ±30°    |
| 0t<br>  |    |  ±30°  |  ±30°  |
|  T  NZK   |  23.9 ft  |  19.3 ft   |  14.9 ft  |
| 154350 lbs<br>110230 lbs<br>66100 lbs<br>  |   |    | —  |
| 22050/0 lbs<br>  |   | —  | —  |
|  T  V  NZK |  23.9 ft  |  19.3 ft   |  14.9 ft  |
| 154350 lbs<br>110230 lbs<br>66100 lbs<br>  |   |    | —  |
| 22050 lbs<br>  |   | —  | —  |

ballast versions see operation manual · variantes de lestage, voir le manuel d'instructions

n.v. / n.h. = over front/rear · en avant/arrière

## Overview of load charts

### Aperçu des tableaux de charge

|   |               |      |
|---|---------------|------|
|   |               |      |
| 110230 lbs<br>66100 lbs<br>22050 lbs<br>0 lbs | <br>44100 lbs | <br> |
| <br>0 lbs                                     | <br>0 lbs     |      |
|   |               |      |
| 110230 lbs<br>66100 lbs<br>22050 lbs<br>0 lbs | <br>44100 lbs |      |
| <br>0 lbs                                     | <br>0 lbs     |      |
|   |               |      |
| 154350 lbs<br>110230 lbs<br>66100 lbs         | <br>44100 lbs | —    |
| <br>22050 / 0 lbs                             | <br>44100 lbs | —    |
|   |               |      |
| 154350 lbs<br>110230 lbs<br>66100 lbs         | <br>44100 lbs | —    |
| <br>22050 lbs                                 | <br>44100 lbs | —    |

ballast versions see operation manual · variantes de lestage, voir le manuel d'instructions

# Lifting capacities

## Forces de levage

T

|     |    | 44 - 197 ft | 23.9 ft | 360°  | 154350 lbs<br>110200 lbs<br>66100 lbs | 44100 lbs | 75%    |        |        |        |        |        |        |      |     |     |  |
|-----|----|-------------|---------|-------|---------------------------------------|-----------|--------|--------|--------|--------|--------|--------|--------|------|-----|-----|--|
|     |    | 44 ft       | 58 ft   | 72 ft | 86 ft                                 | 100 ft    | 114 ft | 128 ft | 142 ft | 156 ft | 171 ft | 185 ft | 197 ft |      |     |     |  |
| *   | ft |             |         |       |                                       |           |        |        |        |        |        |        |        |      |     |     |  |
| 10  |    | 485         | 295.4   | 295.4 | 295.4                                 |           |        |        |        |        |        |        |        |      |     | 10  |  |
| 11  |    | 330         | 295.4   | 295.4 | 295.4                                 |           |        |        |        |        |        |        |        |      |     | 11  |  |
| 12  |    | 323         | 294.1   | 295.2 | 293.9                                 | 240.9     |        |        |        |        |        |        |        |      |     | 12  |  |
| 13  |    | 311.2       | 290.2   | 289.5 | 288.3                                 | 261.8     |        |        |        |        |        |        |        |      |     | 13  |  |
| 14  |    | 292.4       | 277.9   | 278.2 | 276.9                                 | 263.7     |        |        |        |        |        |        |        |      |     | 14  |  |
| 15  |    | 277.9       | 266.7   | 266.9 | 263.5                                 | 259       |        |        |        |        |        |        |        |      |     | 15  |  |
| 16  |    | 265.4       | 256.1   | 255.8 | 249.8                                 | 244.8     | 216.9  |        |        |        |        |        |        |      |     | 16  |  |
| 17  |    | 254.2       | 246.2   | 245.8 | 240.2                                 | 235.6     | 216.5  |        |        |        |        |        |        |      |     | 17  |  |
| 18  |    | 244.5       | 237     | 237.4 | 231.7                                 | 226.3     | 215    |        |        |        |        |        |        |      |     | 18  |  |
| 19  |    | 235.5       | 228.2   | 229.4 | 223.2                                 | 217.7     | 212.1  | 176    |        |        |        |        |        |      |     | 19  |  |
| 20  |    | 226.9       | 219.7   | 221.2 | 215.2                                 | 210       | 205.8  | 175.4  |        |        |        |        |        |      |     | 20  |  |
| 22  |    | 211.2       | 204.3   | 206   | 201.3                                 | 195.8     | 191.7  | 174    | 117.7  |        |        |        |        |      |     | 22  |  |
| 24  |    | 196.8       | 190.7   | 192.5 | 188.7                                 | 183.5     | 179.3  | 171.7  | 124.8  |        |        |        |        |      |     | 24  |  |
| 26  |    | 183.3       | 178.6   | 180.4 | 177.6                                 | 172.6     | 168.4  | 167.1  | 120.8  | 99.5   |        |        |        |      |     | 26  |  |
| 28  |    | 170.3       | 167.7   | 169.5 | 167.6                                 | 163.1     | 160.6  | 158.2  | 116.4  | 98.7   |        |        |        |      |     | 28  |  |
| 30  |    | 157.3       | 157     | 159.2 | 158.7                                 | 154.4     | 153    | 149.6  | 111.9  | 96.2   | 81     |        |        |      |     | 30  |  |
| 32  |    | 143.3       | 143.3   | 150.1 | 150.5                                 | 146.4     | 145.4  | 141.8  | 107.6  | 93.4   | 79.6   |        |        |      |     | 32  |  |
| 34  |    | 126.7       | 126.7   | 141.5 | 142                                   | 139.1     | 138.1  | 134.8  | 103.4  | 90.4   | 77.9   | 64.6   |        |      |     | 34  |  |
| 36  |    | 99.3        | 99.3    | 133.3 | 133.9                                 | 132.7     | 131.8  | 128.5  | 99.2   | 87.4   | 75.9   | 63.8   |        |      |     | 36  |  |
| 38  |    |             |         | 125.9 | 126.5                                 | 125.8     | 125.9  | 122.8  | 95.1   | 84.9   | 73.9   | 62.5   |        |      |     | 38  |  |
| 40  |    |             |         | 118.8 | 119.5                                 | 118.9     | 120.4  | 117.3  | 91.2   | 82.6   | 71.9   | 61.2   | 52.1   |      |     | 40  |  |
| 45  |    |             |         | 101.7 | 104.2                                 | 103.5     | 105.5  | 104.2  | 82.7   | 76.8   | 67.1   | 57.7   | 49.8   | 41.8 |     | 45  |  |
| 50  |    |             |         | 68.8  | 90.8                                  | 93.3      | 92.3   | 90.8   | 75.1   | 70.9   | 62.8   | 54.3   | 47.1   |      |     | 50  |  |
| 55  |    |             |         |       | 82.2                                  | 82.3      | 81.3   | 80     | 68.7   | 65.5   | 58.8   | 51.1   | 44.6   | 38   |     | 55  |  |
| 60  |    |             |         |       | 72.1                                  | 73.4      | 72.4   | 71     | 63.4   | 60.6   | 54.9   | 48.2   | 42.2   | 36.1 |     | 60  |  |
| 65  |    |             |         |       |                                       | 65.9      | 64.9   | 63.5   | 59.7   | 56.1   | 51.3   | 45.6   | 39.9   | 34.3 |     | 65  |  |
| 70  |    |             |         |       |                                       | 59.7      | 58.6   | 57.2   | 56.6   | 52.2   | 48     | 43.1   | 37.9   | 32.6 |     | 70  |  |
| 75  |    |             |         |       |                                       | 52        | 53.2   | 51.7   | 53.5   | 48.5   | 45.1   | 40.9   | 36     | 31   |     | 75  |  |
| 80  |    |             |         |       |                                       |           | 48.5   | 47.2   | 48.8   | 45.3   | 42.4   | 38.8   | 34.2   | 29.5 |     | 80  |  |
| 85  |    |             |         |       |                                       |           | 44.4   | 45     | 44.6   | 42.2   | 39.9   | 36.9   | 32.5   | 28   |     | 85  |  |
| 90  |    |             |         |       |                                       |           | 39.4   | 42.4   | 40.9   | 39.2   | 37.9   | 35.1   | 30.9   | 26.7 |     | 90  |  |
| 95  |    |             |         |       |                                       |           |        | 39.2   | 37.6   | 36     | 35.9   | 33.3   | 29.5   | 25.4 |     | 95  |  |
| 100 |    |             |         |       |                                       |           |        | 36.3   | 34.7   | 33.9   | 33.8   | 31.6   | 28.1   | 24.3 |     | 100 |  |
| 105 |    |             |         |       |                                       |           |        | 28.2   | 32.1   | 31.8   | 31.3   | 29.9   | 26.8   | 23.2 |     | 105 |  |
| 110 |    |             |         |       |                                       |           |        |        | 29.7   | 30.4   | 28.9   | 28.3   | 25.7   | 22.2 |     | 110 |  |
| 115 |    |             |         |       |                                       |           |        |        | 27.5   | 28.3   | 26.7   | 26.7   | 24.5   | 21.2 |     | 115 |  |
| 120 |    |             |         |       |                                       |           |        |        | 20.5   | 26.3   | 25.4   | 25     | 23.5   | 20.3 |     | 120 |  |
| 125 |    |             |         |       |                                       |           |        |        |        | 24.5   | 23.8   | 23.2   | 22.5   | 19.4 |     | 125 |  |
| 130 |    |             |         |       |                                       |           |        |        |        | 22.4   | 22.7   | 21.5   | 21.1   | 18.6 |     | 130 |  |
| 135 |    |             |         |       |                                       |           |        |        |        | 12.6   | 21.4   | 19.9   | 19.6   | 17.8 |     | 135 |  |
| 140 |    |             |         |       |                                       |           |        |        |        |        | 19.9   | 18.9   | 18.1   | 17.1 |     | 140 |  |
| 145 |    |             |         |       |                                       |           |        |        |        |        | 17.1   | 18     | 16.8   | 16.5 |     | 145 |  |
| 150 |    |             |         |       |                                       |           |        |        |        |        |        | 16.8   | 15.5   | 15.7 |     | 150 |  |
| 155 |    |             |         |       |                                       |           |        |        |        |        |        | 15.7   | 14.4   | 14.6 |     | 155 |  |
| 160 |    |             |         |       |                                       |           |        |        |        |        |        | 12.2   | 13.3   | 13.5 |     | 160 |  |
| 165 |    |             |         |       |                                       |           |        |        |        |        |        | 12.3   | 12.5   | 165  |     |     |  |
| 170 |    |             |         |       |                                       |           |        |        |        |        |        |        | 11.4   | 11.5 | 170 |     |  |
| 175 |    |             |         |       |                                       |           |        |        |        |        |        |        | 7.7    | 10.6 | 175 |     |  |
| 180 |    |             |         |       |                                       |           |        |        |        |        |        |        |        | 9.8  | 180 |     |  |
| 185 |    |             |         |       |                                       |           |        |        |        |        |        |        |        | 8.1  | 185 |     |  |

\* 0° = over rear/front · en arrière/avant

t\_242\_00090\_00\_001 / 00100\_00\_001 / 00101\_00\_001 / 00102\_00\_001

# Lifting capacities

## Forces de levage

T

|     | 44 - 197 ft | 19.3 ft | 360°  | 154350 lbs<br>110200 lbs<br>66100 lbs | 44100 lbs | 75%    |        |        |        |        |        |        |        |     |
|-----|-------------|---------|-------|---------------------------------------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|-----|
|     | ft          | 44 ft   | 58 ft | 72 ft                                 | 86 ft     | 100 ft | 114 ft | 128 ft | 142 ft | 156 ft | 171 ft | 185 ft | 197 ft | ft  |
| 10  |             | 295.4   | 295.4 | 295.4                                 |           |        |        |        |        |        |        |        |        | 10  |
| 11  |             | 295.4   | 295.4 | 295.4                                 |           |        |        |        |        |        |        |        |        | 11  |
| 12  |             | 294.1   | 295.2 | 293.9                                 | 240.9     |        |        |        |        |        |        |        |        | 12  |
| 13  |             | 290.2   | 289.5 | 288.3                                 | 261.8     |        |        |        |        |        |        |        |        | 13  |
| 14  |             | 277.9   | 278.2 | 276.9                                 | 263.7     |        |        |        |        |        |        |        |        | 14  |
| 15  |             | 266.7   | 266.9 | 263.5                                 | 259       |        |        |        |        |        |        |        |        | 15  |
| 16  |             | 256.1   | 255.8 | 249.8                                 | 244.8     | 216.9  |        |        |        |        |        |        |        | 16  |
| 17  |             | 246.2   | 245.8 | 240.2                                 | 235.6     | 216.5  |        |        |        |        |        |        |        | 17  |
| 18  |             | 237     | 237.4 | 231.7                                 | 226.3     | 213.6  |        |        |        |        |        |        |        | 18  |
| 19  |             | 228.2   | 229.4 | 223.2                                 | 217.7     | 207.7  | 176    |        |        |        |        |        |        | 19  |
| 20  |             | 219.7   | 221.2 | 215.2                                 | 210       | 200.8  | 175.4  |        |        |        |        |        |        | 20  |
| 22  |             | 204.3   | 206   | 201.3                                 | 195.8     | 187    | 169.7  | 117.7  |        |        |        |        |        | 22  |
| 24  |             | 190.7   | 192.5 | 188.7                                 | 183.5     | 175.5  | 160.4  | 124.8  |        |        |        |        |        | 24  |
| 26  |             | 178.6   | 180.4 | 177.6                                 | 172.6     | 168.2  | 151.3  | 120.8  | 99.5   |        |        |        |        | 26  |
| 28  |             | 167.7   | 169.5 | 167.6                                 | 162.5     | 158.7  | 143    | 116.4  | 98.7   |        |        |        |        | 28  |
| 30  |             | 156.8   | 159.1 | 158.7                                 | 151.4     | 147    | 135.6  | 111.9  | 96.2   | 81     |        |        |        | 30  |
| 32  |             | 142.5   | 145.4 | 146.1                                 | 140.2     | 137    | 128.8  | 107.6  | 93.4   | 79.6   |        |        |        | 32  |
| 34  |             | 126.7   | 132.6 | 133.6                                 | 130.4     | 127.6  | 120.8  | 103.4  | 90.4   | 77.9   | 64.6   |        |        | 34  |
| 36  |             | 99.3    | 121.8 | 122.7                                 | 123.7     | 119.8  | 113.3  | 99.2   | 87.4   | 75.9   | 63.8   |        |        | 36  |
| 38  |             |         | 112.4 | 113.3                                 | 116       | 112.5  | 106.7  | 95.1   | 84.9   | 73.9   | 62.5   |        |        | 38  |
| 40  |             |         | 105.5 | 107                                   | 107.6     | 106    | 100.5  | 91.2   | 82.6   | 71.9   | 61.2   | 52.1   |        | 40  |
| 45  |             |         | 88.9  | 90.6                                  | 90.9      | 90.1   | 87.6   | 82.6   | 76.8   | 67.1   | 57.7   | 49.8   | 41.8   | 45  |
| 50  |             |         | 68.8  | 78                                    | 78.2      | 77.4   | 76     | 73.1   | 70.9   | 62.8   | 54.3   | 47.1   | 40     | 50  |
| 55  |             |         |       | 68.1                                  | 68.2      | 67.3   | 66.2   | 66.8   | 64.9   | 58.8   | 51.1   | 44.6   | 38     | 55  |
| 60  |             |         |       | 60.2                                  | 60.3      | 59.4   | 59.3   | 59.9   | 58.1   | 54.9   | 48.2   | 42.2   | 36.1   | 60  |
| 65  |             |         |       |                                       | 53.7      | 52.8   | 54.6   | 53.3   | 51.9   | 51     | 45.6   | 39.9   | 34.3   | 65  |
| 70  |             |         |       |                                       | 48.3      | 47.9   | 49.1   | 47.8   | 47.1   | 46.5   | 43.1   | 37.9   | 32.6   | 70  |
| 75  |             |         |       |                                       | 43.7      | 45.1   | 44.3   | 43     | 42.9   | 42.4   | 40.9   | 36     | 31     | 75  |
| 80  |             |         |       |                                       |           | 41.2   | 40.3   | 39.1   | 39.8   | 38.4   | 38.1   | 34.2   | 29.5   | 80  |
| 85  |             |         |       |                                       |           | 37.8   | 36.8   | 35.9   | 36.3   | 35.6   | 34.8   | 32.5   | 28     | 85  |
| 90  |             |         |       |                                       |           | 34.8   | 33.8   | 33.9   | 33.2   | 32.7   | 32.2   | 30.9   | 26.7   | 90  |
| 95  |             |         |       |                                       |           |        | 31.1   | 31.7   | 30.4   | 30.4   | 29.4   | 29.1   | 25.4   | 95  |
| 100 |             |         |       |                                       |           |        | 28.8   | 29.3   | 28.2   | 28.2   | 27.4   | 26.7   | 24.3   | 100 |
| 105 |             |         |       |                                       |           |        | 26.7   | 27.2   | 26.2   | 26     | 25.6   | 24.5   | 23.2   | 105 |
| 110 |             |         |       |                                       |           |        |        | 25.2   | 24.7   | 24.1   | 23.6   | 22.5   | 22.2   | 110 |
| 115 |             |         |       |                                       |           |        |        | 23.5   | 23.3   | 22.3   | 21.8   | 20.6   | 20.8   | 115 |
| 120 |             |         |       |                                       |           |        |        | 20.5   | 21.7   | 20.7   | 20.1   | 18.9   | 19.1   | 120 |
| 125 |             |         |       |                                       |           |        |        |        | 20.3   | 19.4   | 18.6   | 17.3   | 17.6   | 125 |
| 130 |             |         |       |                                       |           |        |        |        | 19     | 18     | 17.1   | 15.9   | 16.1   | 130 |
| 135 |             |         |       |                                       |           |        |        |        | 12.6   | 16.7   | 15.8   | 14.6   | 14.8   | 135 |
| 140 |             |         |       |                                       |           |        |        |        |        | 15.5   | 14.6   | 13.4   | 13.6   | 140 |
| 145 |             |         |       |                                       |           |        |        |        |        | 14.4   | 13.5   | 12.3   | 12.5   | 145 |
| 150 |             |         |       |                                       |           |        |        |        |        |        | 12.5   | 11.2   | 11.4   | 150 |
| 155 |             |         |       |                                       |           |        |        |        |        |        | 11.5   | 10.2   | 10.4   | 155 |
| 160 |             |         |       |                                       |           |        |        |        |        |        | 10.7   | 9.4    | 9.5    | 160 |
| 165 |             |         |       |                                       |           |        |        |        |        |        |        | 8.5    | 8.7    | 165 |
| 170 |             |         |       |                                       |           |        |        |        |        |        |        | 7.8    | 7.9    | 170 |
| 175 |             |         |       |                                       |           |        |        |        |        |        |        | 7.1    | 7.1    | 175 |
| 180 |             |         |       |                                       |           |        |        |        |        |        |        |        | 6.4    | 180 |
| 185 |             |         |       |                                       |           |        |        |        |        |        |        |        | 5.8    | 185 |

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# Lifting capacities

## Forces de levage

T

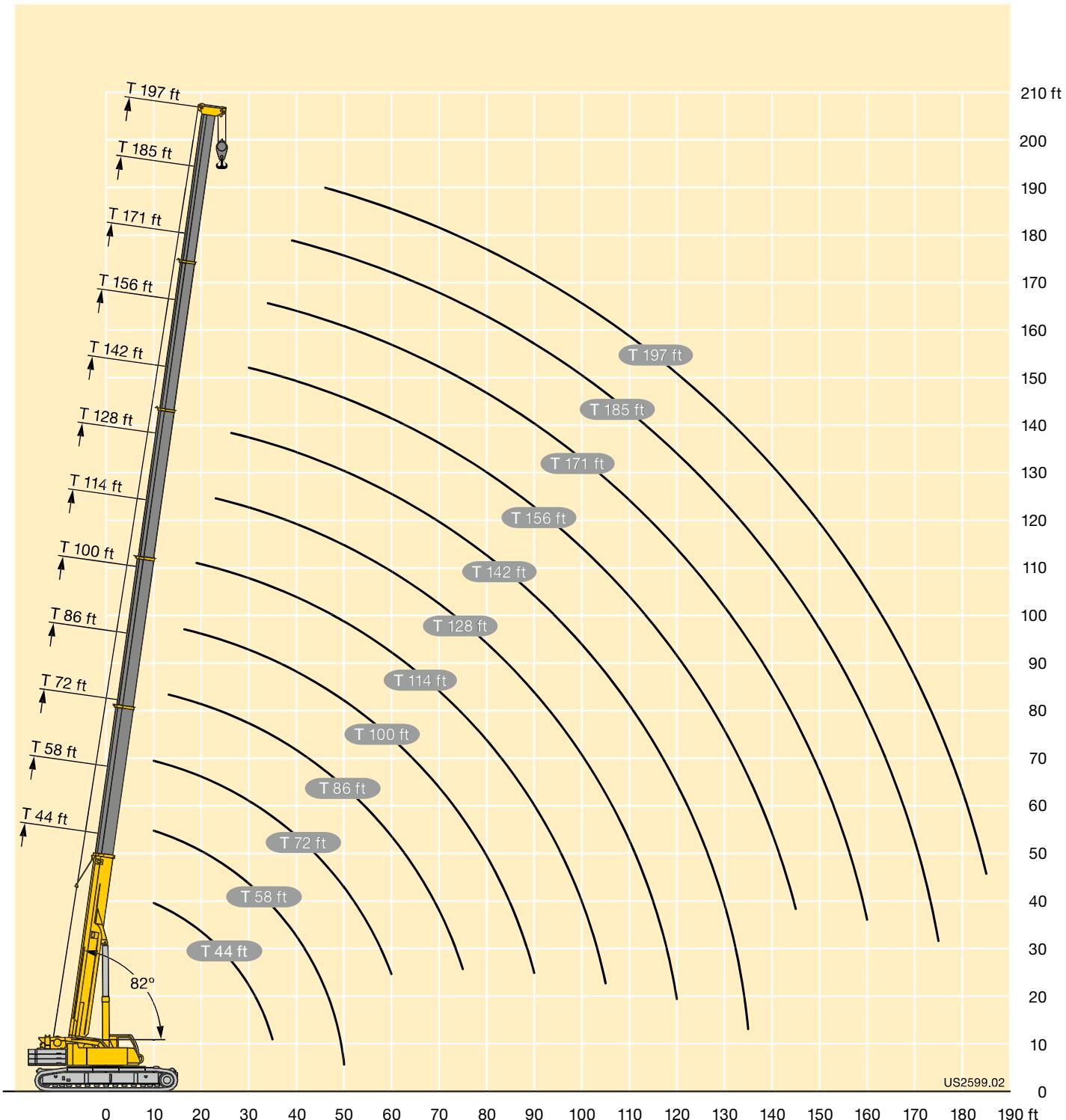
|     | 44 - 197 ft | 14.9 ft | 360°  | 154350 lbs<br>110200 lbs<br>66100 lbs | 44100 lbs | 75%  | 44 ft | 58 ft | 72 ft | 86 ft | 100 ft | 114 ft | 128 ft | 142 ft | 156 ft | 171 ft | 185 ft | 197 ft |     |
|-----|-------------|---------|-------|---------------------------------------|-----------|------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-----|
| 10  | 294         | 237.9   | 189.2 |                                       |           |      |       |       |       |       |        |        |        |        |        |        |        |        | 10  |
| 11  | 265.4       | 224     | 179.5 |                                       |           |      |       |       |       |       |        |        |        |        |        |        |        |        | 11  |
| 12  | 237.6       | 209.6   | 170.6 | 135.9                                 |           |      |       |       |       |       |        |        |        |        |        |        |        |        | 12  |
| 13  | 213.3       | 193.7   | 162.4 | 136.6                                 |           |      |       |       |       |       |        |        |        |        |        |        |        |        | 13  |
| 14  | 193.9       | 179.2   | 155.1 | 132.1                                 |           |      |       |       |       |       |        |        |        |        |        |        |        |        | 14  |
| 15  | 177.5       | 165.2   | 148.3 | 127.3                                 |           |      |       |       |       |       |        |        |        |        |        |        |        |        | 15  |
| 16  | 196.7       | 182.9   | 141.4 | 122.6                                 | 106       |      |       |       |       |       |        |        |        |        |        |        |        |        | 16  |
| 17  | 196.4       | 179.1   | 164.6 | 136.6                                 | 102.7     |      |       |       |       |       |        |        |        |        |        |        |        |        | 17  |
| 18  | 190.4       | 174.3   | 161.3 | 131.6                                 | 99.5      |      |       |       |       |       |        |        |        |        |        |        |        |        | 18  |
| 19  | 178.8       | 165.6   | 152.7 | 130.5                                 | 96.4      | 85.3 |       |       |       |       |        |        |        |        |        |        |        |        | 19  |
| 20  | 167.8       | 159.4   | 144   | 126.1                                 | 107.9     | 82.9 |       |       |       |       |        |        |        |        |        |        |        |        | 20  |
| 22  | 145.8       | 142.7   | 133   | 122.4                                 | 101.3     | 91.7 | 69.4  |       |       |       |        |        |        |        |        |        |        |        | 22  |
| 24  | 127.2       | 128.8   | 123.2 | 112.5                                 | 99.5      | 86.7 | 66.5  |       |       |       |        |        |        |        |        |        |        |        | 24  |
| 26  | 112.5       | 116.4   | 112.4 | 106.6                                 | 99.7      | 87.5 | 76.1  | 56.8  |       |       |        |        |        |        |        |        |        |        | 26  |
| 28  | 100.5       | 104.5   | 103.1 | 98.4                                  | 94.5      | 84.8 | 76.6  | 68    |       |       |        |        |        |        |        |        |        |        | 28  |
| 30  | 116.2       | 94.3    | 95.2  | 105.4                                 | 89.3      | 82.6 | 74.5  | 67.1  | 60.4  |       |        |        |        |        |        |        |        |        | 30  |
| 32  | 105.8       | 105.2   | 103.6 | 97.4                                  | 83.3      | 78.5 | 73.1  | 65.7  | 59.1  |       |        |        |        |        |        |        |        |        | 32  |
| 34  | 96.9        | 99.3    | 97.6  | 93.5                                  | 77.7      | 73.5 | 70.2  | 64.3  | 58.4  | 52.9  |        |        |        |        |        |        |        |        | 34  |
| 36  | 89.1        | 91.5    | 89.8  | 87.4                                  | 82.4      | 68.9 | 67.3  | 61.8  | 56.3  | 51    |        |        |        |        |        |        |        |        | 36  |
| 38  |             | 85.9    | 85.5  | 81.4                                  | 80.8      | 64.9 | 63.6  | 59.6  | 54.3  | 49.2  |        |        |        |        |        |        |        |        | 38  |
| 40  |             | 79.9    | 79.5  | 78.9                                  | 75.9      | 71.7 | 60    | 57.5  | 52.4  | 47.5  | 42.7   |        |        |        |        |        |        |        | 40  |
| 45  |             | 67.6    | 69.2  | 69.4                                  | 68.6      | 66.8 | 63.4  | 59.8  | 48.1  | 43.6  | 39.1   | 37.1   |        |        |        |        |        |        | 45  |
| 50  |             | 58.2    | 59.6  | 59.8                                  | 61.7      | 59.6 | 58.7  | 55.7  | 52.7  | 40    | 36     | 34.2   |        |        |        |        |        |        | 50  |
| 55  |             |         | 52.5  | 52.2                                  | 54        | 53.2 | 52.2  | 51.2  | 49.2  | 47.2  | 32.9   | 31.6   |        |        |        |        |        |        | 55  |
| 60  |             |         | 46.4  | 47.7                                  | 47.8      | 46.9 | 47.7  | 46.5  | 45    | 42.8  | 40.8   | 36.1   |        |        |        |        |        |        | 60  |
| 65  |             |         |       | 42.7                                  | 42.6      | 41.8 | 42.6  | 41.7  | 40.7  | 39.1  | 36.8   | 34.3   |        |        |        |        |        |        | 65  |
| 70  |             |         |       |                                       | 38.4      | 38.3 | 38.7  | 38.2  | 37.9  | 36.9  | 35.5   | 33.2   | 32.6   |        |        |        |        |        | 70  |
| 75  |             |         |       |                                       | 34.8      | 34.6 | 35.1  | 34.5  | 34.4  | 33.8  | 32.3   | 30.1   | 29.8   |        |        |        |        |        | 75  |
| 80  |             |         |       |                                       |           | 31.6 | 31.9  | 31.3  | 31.2  | 30.6  | 29.4   | 27.3   | 27.1   |        |        |        |        |        | 80  |
| 85  |             |         |       |                                       |           | 29   | 29.1  | 28.8  | 28.4  | 27.8  | 26.9   | 24.8   | 24.6   |        |        |        |        |        | 85  |
| 90  |             |         |       |                                       |           | 26.6 | 26.7  | 26.3  | 25.9  | 25.3  | 24.5   | 22.6   | 22.4   |        |        |        |        |        | 90  |
| 95  |             |         |       |                                       |           |      | 24.6  | 24.2  | 23.7  | 23.1  | 22.3   | 20.6   | 20.4   |        |        |        |        |        | 95  |
| 100 |             |         |       |                                       |           |      | 22.7  | 22.2  | 21.8  | 21.1  | 20.3   | 18.8   | 18.6   |        |        |        |        |        | 100 |
| 105 |             |         |       |                                       |           |      | 21    | 20.5  | 20    | 19.3  | 18.4   | 17.1   | 17     |        |        |        |        |        | 105 |
| 110 |             |         |       |                                       |           |      |       | 18.9  | 18.4  | 17.6  | 16.7   | 15.5   | 15.5   |        |        |        |        |        | 110 |
| 115 |             |         |       |                                       |           |      |       | 17.4  | 16.9  | 16.1  | 15.2   | 14     | 14.2   |        |        |        |        |        | 115 |
| 120 |             |         |       |                                       |           |      |       | 16.1  | 15.5  | 14.7  | 13.8   | 12.6   | 12.8   |        |        |        |        |        | 120 |
| 125 |             |         |       |                                       |           |      |       |       | 14.3  | 13.4  | 12.5   | 11.3   | 11.6   |        |        |        |        |        | 125 |
| 130 |             |         |       |                                       |           |      |       |       | 13.2  | 12.3  | 11.4   | 10.2   | 10.4   |        |        |        |        |        | 130 |
| 135 |             |         |       |                                       |           |      |       |       | 12.2  | 11.2  | 10.3   | 9.1    | 9.3    |        |        |        |        |        | 135 |
| 140 |             |         |       |                                       |           |      |       |       |       | 10.2  | 9.3    | 8.1    | 8.3    |        |        |        |        |        | 140 |
| 145 |             |         |       |                                       |           |      |       |       |       | 9.4   | 8.4    | 7.2    | 7.4    |        |        |        |        |        | 145 |
| 150 |             |         |       |                                       |           |      |       |       |       |       | 7.6    | 6.4    | 6.5    |        |        |        |        |        | 150 |
| 155 |             |         |       |                                       |           |      |       |       |       |       | 6.8    | 5.6    | 5.7    |        |        |        |        |        | 155 |
| 160 |             |         |       |                                       |           |      |       |       |       |       | 6.2    | 4.9    | 5      |        |        |        |        |        | 160 |
| 165 |             |         |       |                                       |           |      |       |       |       |       |        | 4.2    | 4.3    |        |        |        |        |        | 165 |
| 170 |             |         |       |                                       |           |      |       |       |       |       |        | 3.6    | 3.7    |        |        |        |        |        | 170 |
| 175 |             |         |       |                                       |           |      |       |       |       |       |        | 3      | 3.1    |        |        |        |        |        | 175 |
| 180 |             |         |       |                                       |           |      |       |       |       |       |        |        | 2.5    |        |        |        |        |        | 180 |

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# Lifting heights

## Hauteurs de levage

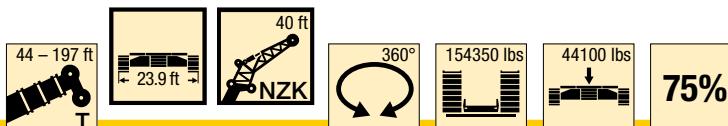
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# Lifting capacities

## Forces de levage

**TNZK**



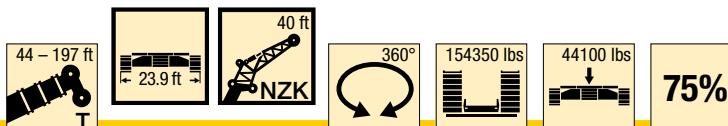
| ft  | 44 ft |       |      | 58 ft |       |      | 72 ft |       |      | 86 ft |       |      | 100 ft |       |      | 114 ft |       |      | ft  |  |
|-----|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|--------|-------|------|--------|-------|------|-----|--|
|     | 40 ft |       |      | 40 ft |       |      | 40 ft |       |      | 40 ft |       |      | 40 ft  |       |      | 40 ft  |       |      |     |  |
|     | 0°    | 22.5° | 45°  | 0°    | 22.5° | 45°  | 0°    | 22.5° | 45°  | 0°    | 22.5° | 45°  | 0°     | 22.5° | 45°  | 0°     | 22.5° | 45°  |     |  |
| 10  | 46.1  |       |      |       |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 10  |  |
| 11  | 46.1  |       |      | 46.1  |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 11  |  |
| 12  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      |       |       |      |        |       |      |        |       |      | 12  |  |
| 13  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      |       |       |      |        |       |      |        |       |      | 13  |  |
| 14  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      |       |       |      |        |       |      |        |       |      | 14  |  |
| 15  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      |       |       |      |        |       |      |        |       |      | 15  |  |
| 16  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      |        |       |      |        |       |      | 16  |  |
| 17  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      |        |       |      |        |       |      | 17  |  |
| 18  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      |        |       |      |        |       |      | 18  |  |
| 19  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1   |       |      |        |       |      | 19  |  |
| 20  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1   |       |      |        |       |      | 20  |  |
| 22  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1   |       |      |        |       |      | 22  |  |
| 24  | 46.1  | 36.8  |      | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1   |       |      | 46.1   |       |      | 24  |  |
| 26  | 46.1  | 35    |      | 46.1  | 36.6  |      | 46.1  |       |      | 46.1  |       |      | 46.1   |       |      | 46.1   |       |      | 26  |  |
| 28  | 46.1  | 33.3  |      | 46.1  | 35.1  |      | 46.1  |       |      | 46.1  |       |      | 46.1   |       |      | 46.1   |       |      | 28  |  |
| 30  | 45.7  | 31.8  |      | 46.1  | 33.7  |      | 46.1  | 34.5  |      | 46.1  |       |      | 46.1   |       |      | 46.1   |       |      | 30  |  |
| 32  | 44.4  | 30.5  |      | 46.1  | 32.4  |      | 46.1  | 33.3  |      | 46.1  |       |      | 46.1   |       |      | 46.1   |       |      | 32  |  |
| 34  | 42.9  | 29.3  | 23.2 | 46.1  | 31.2  |      | 46.1  | 32.2  |      | 46.1  | 33.2  |      | 46     |       |      | 45.8   |       |      | 34  |  |
| 36  | 41.4  | 28.2  | 23.2 | 45.9  | 30.1  | 23.2 | 46    | 31.2  |      | 46.1  | 32.2  |      | 45.3   | 32.6  |      | 45.3   |       |      | 36  |  |
| 38  | 39.5  | 27.2  | 23.1 | 44.7  | 29.1  | 23.2 | 45.8  | 30.2  |      | 45.6  | 31.3  |      | 44.5   | 31.7  |      | 44.5   |       |      | 38  |  |
| 40  | 37.3  | 26.2  | 22.7 | 43    | 28.2  | 23.2 | 44.5  | 29.3  | 23.2 | 45.1  | 30.4  |      | 43.2   | 30.9  |      | 43.5   | 31.5  |      | 40  |  |
| 45  | 32.5  | 24.1  | 21.5 | 38.5  | 26    | 22.3 | 40.7  | 27.3  | 22.7 | 43.2  | 28.4  |      | 39.6   | 29    |      | 40.3   | 29.7  |      | 45  |  |
| 50  | 28.7  | 22.3  | 20.5 | 34.3  | 24.3  | 21.3 | 37.2  | 25.6  | 21.8 | 39.9  | 26.7  | 22.3 | 36.3   | 27.4  | 22.6 | 37.4   | 28.1  |      | 50  |  |
| 55  | 25.6  | 20.8  | 19.8 | 30.8  | 22.7  | 20.5 | 33.9  | 24.1  | 21.1 | 36.9  | 25.3  | 21.6 | 33.5   | 26    | 21.8 | 34.8   | 26.6  | 22.1 | 55  |  |
| 60  | 23.2  | 19.5  | 19.2 | 27.8  | 21.4  | 19.9 | 31.2  | 22.8  | 20.4 | 34.2  | 23.9  | 20.9 | 31     | 24.7  | 21.2 | 32.4   | 25.4  | 21.5 | 60  |  |
| 65  | 21    | 18.5  | 19   | 25.3  | 20.2  | 19.4 | 28.8  | 21.6  | 19.9 | 31.8  | 22.8  | 20.4 | 28.9   | 23.5  | 20.7 | 30.3   | 24.3  | 21   | 65  |  |
| 70  | 19.2  | 17.6  | 10.4 | 23.3  | 19.2  | 19.1 | 26.6  | 20.6  | 19.5 | 29.5  | 21.8  | 19.9 | 26.8   | 22.5  | 20.2 | 28.5   | 23.3  | 20.5 | 70  |  |
| 75  | 17.6  | 17.4  |      | 21.4  | 18.4  | 19   | 24.7  | 19.7  | 19.1 | 27.5  | 20.9  | 19.5 | 25.1   | 21.7  | 19.8 | 26.8   | 22.4  | 20.1 | 75  |  |
| 80  |       |       |      | 19.8  | 17.7  |      | 22.9  | 18.9  | 19   | 25.7  | 20.1  | 19.2 | 23.4   | 20.8  | 19.5 | 25.2   | 21.6  | 19.8 | 80  |  |
| 85  |       |       |      | 18.5  | 17.3  |      | 21.4  | 18.3  | 18.9 | 24.2  | 19.3  | 19.1 | 22     | 20.1  | 19.3 | 23.8   | 20.9  | 19.5 | 85  |  |
| 90  |       |       |      | 17.3  |       |      | 20.1  | 17.7  | 18.9 | 22.7  | 18.7  | 19   | 20.6   | 19.4  | 19   | 22.4   | 20.2  | 19.3 | 90  |  |
| 95  |       |       |      |       |       |      | 18.9  | 17.4  |      | 21.4  | 18.2  | 19   | 19.4   | 18.8  | 18.7 | 21.2   | 19.7  | 19.1 | 95  |  |
| 100 |       |       |      |       |       |      | 17.9  | 17.3  |      | 20.2  | 17.7  | 19   | 18.3   | 18    | 18.1 | 20.1   | 19    | 18.9 | 100 |  |
| 105 |       |       |      |       |       |      |       |       |      | 19.2  | 17.4  | 19   | 17.3   | 17.1  | 17.3 | 19.1   | 18.4  | 18.3 | 105 |  |
| 110 |       |       |      |       |       |      |       |       |      | 18.3  | 17.3  |      | 16.3   | 16.2  | 16.5 | 18.1   | 17.7  | 17.6 | 110 |  |
| 115 |       |       |      |       |       |      |       |       |      | 17.5  |       |      | 15.5   | 15.4  | 15.7 | 17.3   | 16.9  | 17   | 115 |  |
| 120 |       |       |      |       |       |      |       |       |      |       |       |      | 14.7   | 14.7  |      | 16.5   | 16.2  | 16.4 | 120 |  |
| 125 |       |       |      |       |       |      |       |       |      |       |       |      | 14.1   | 14.1  |      | 15.7   | 15.6  | 15.8 | 125 |  |
| 130 |       |       |      |       |       |      |       |       |      |       |       |      | 13.5   |       |      | 15.1   | 15    | 15.2 | 130 |  |
| 135 |       |       |      |       |       |      |       |       |      |       |       |      | 14.5   | 14.4  |      | 14     |       |      | 135 |  |
| 140 |       |       |      |       |       |      |       |       |      |       |       |      | 14     |       |      | 13.5   |       |      | 140 |  |
| 145 |       |       |      |       |       |      |       |       |      |       |       |      | 13.5   |       |      |        |       |      | 145 |  |

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# Lifting capacities

## Forces de levage

**TNZK**



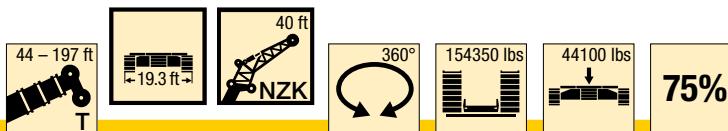
| ft  | 128 ft |       |      | 142 ft |       |      | 156 ft |       |      | 171 ft |       |      | 185 ft |       |      | 197 ft |       |      | ft  |     |
|-----|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|------|-----|-----|
|     | 40 ft  |       |      | 40 ft  |       |      | 40 ft  |       |      | 40 ft  |       |      | 40 ft  |       |      | 40 ft  |       |      |     |     |
|     | 0°     | 22.5° | 45°  | 0°     | 22.5° | 45°  | 0°     | 22.5° | 45°  | 0°     | 22.5° | 45°  | 0°     | 22.5° | 45°  | 0°     | 22.5° | 45°  |     |     |
| 30  | 42.6   |       |      | 45.3   |       |      |        |       |      |        |       |      |        |       |      |        |       |      | 30  |     |
| 32  | 42.4   |       |      | 45.1   |       |      |        |       |      |        |       |      |        |       |      |        |       |      | 32  |     |
| 34  | 42.2   |       |      | 44.9   |       |      |        |       |      |        |       |      |        |       |      |        |       |      | 34  |     |
| 36  | 41.9   |       |      | 44.6   |       |      | 40.4   |       |      |        |       |      |        |       |      |        |       |      | 36  |     |
| 38  | 41.7   |       |      | 44.3   |       |      | 40.2   |       |      |        |       |      |        |       |      |        |       |      | 38  |     |
| 40  | 41.2   |       |      | 44     |       |      | 40     |       |      | 34.7   |       |      |        |       |      |        |       |      | 40  |     |
| 45  | 38.8   |       |      | 43     |       |      | 39.3   |       |      | 34.3   |       |      |        |       |      |        |       |      | 45  |     |
| 50  | 36     | 28.3  |      | 41.8   | 30.5  |      | 38.6   |       |      | 33.9   |       |      | 28.5   |       |      |        |       |      | 50  |     |
| 55  | 33.6   | 27    | 22.2 | 40.6   | 29    |      | 37.8   | 29.3  |      | 33.5   |       |      | 28     |       |      |        |       |      | 55  |     |
| 60  | 31.4   | 25.7  | 21.7 | 39.4   | 27.6  | 22.3 | 37     | 27.9  | 22.6 | 32.9   | 27.6  |      | 27.6   |       |      | 23.6   |       |      | 60  |     |
| 65  | 29.3   | 24.7  | 21.1 | 37.8   | 26.4  | 21.8 | 36.1   | 26.8  | 22   | 32.1   | 26.5  |      | 27.3   |       |      | 23.2   | 22.2  |      | 65  |     |
| 70  | 27.4   | 23.7  | 20.7 | 36     | 25.3  | 21.3 | 34.9   | 25.7  | 21.5 | 31     | 25.5  | 21.5 | 26.8   | 24.8  |      | 22.9   | 22    |      | 70  |     |
| 75  | 25.7   | 22.9  | 20.3 | 34.1   | 24.4  | 20.9 | 33.6   | 24.8  | 21.1 | 29.7   | 24.5  | 21   | 25.8   | 24    | 20.9 | 22.5   | 21.6  |      | 75  |     |
| 80  | 24.2   | 22.1  | 19.9 | 32.2   | 23.5  | 20.5 | 32.1   | 23.9  | 20.7 | 28.2   | 23.7  | 20.6 | 24.8   | 23.2  | 20.6 | 21.6   | 20.7  | 19.7 | 80  |     |
| 85  | 22.7   | 21.3  | 19.7 | 30.4   | 22.8  | 20.2 | 30.5   | 23.1  | 20.4 | 26.9   | 23    | 20.3 | 23.7   | 22.5  | 20.2 | 20.6   | 20    | 19   | 85  |     |
| 90  | 21.4   | 20.5  | 19.4 | 28.8   | 22    | 19.9 | 29     | 22.4  | 20.1 | 25.7   | 22.3  | 20.1 | 22.7   | 21.7  | 20   | 19.7   | 19.2  | 18.3 | 90  |     |
| 95  | 20.2   | 19.7  | 19.1 | 27.2   | 21.4  | 19.6 | 27.6   | 21.8  | 19.8 | 24.5   | 21.7  | 19.8 | 21.7   | 20.9  | 19.7 | 18.9   | 18.5  | 17.7 | 95  |     |
| 100 | 19.1   | 18.8  | 18.8 | 25.8   | 20.8  | 19.4 | 26.4   | 21.2  | 19.6 | 23.3   | 21.2  | 19.6 | 20.8   | 20.2  | 19.3 | 18.1   | 17.8  | 17.1 | 100 |     |
| 105 | 18.1   | 17.8  | 17.9 | 24.5   | 20.2  | 19.2 | 25.1   | 20.6  | 19.4 | 22.3   | 20.6  | 19.4 | 19.9   | 19.4  | 18.7 | 17.2   | 17.1  | 16.5 | 105 |     |
| 110 | 17.1   | 16.9  | 17.1 | 23.2   | 19.7  | 19.1 | 23.9   | 20.1  | 19.2 | 21.3   | 20.1  | 19.3 | 19     | 18.7  | 18.1 | 16.5   | 16.4  | 16   | 110 |     |
| 115 | 16.2   | 16.1  | 16.3 | 22.1   | 19.3  | 19   | 22.9   | 19.7  | 19.1 | 20.3   | 19.5  | 19   | 18.2   | 18    | 17.5 | 15.7   | 15.8  | 15.5 | 115 |     |
| 120 | 15.4   | 15.3  | 15.5 | 21     | 18.8  | 18.9 | 21.8   | 19.2  | 19   | 19.4   | 18.9  | 18.6 | 17.5   | 17.3  | 16.9 | 15     | 15.1  | 14.9 | 120 |     |
| 125 | 14.6   | 14.6  | 14.8 | 20     | 18.5  | 18.9 | 20.8   | 18.8  | 19   | 18.6   | 18.3  | 18.1 | 16.7   | 16.6  | 16.4 | 14.4   | 14.4  | 14.4 | 125 |     |
| 130 | 13.9   | 13.9  | 14.1 | 19.1   | 18.1  | 18.8 | 19.8   | 18.5  | 18.9 | 17.8   | 17.7  | 17.6 | 16     | 15.9  | 15.8 | 13.7   | 13.8  | 13.8 | 130 |     |
| 135 | 13.2   | 13.3  | 13.5 | 18.2   | 17.8  | 18.3 | 18.3   | 18.2  | 18.6 | 17     | 17    | 16.9 | 15.4   | 15.3  | 15.2 | 13.1   | 13.2  | 13.3 | 135 |     |
| 140 | 12.5   | 12.6  | 12.9 | 17.4   | 17.4  | 17.6 | 16.8   | 17.7  | 18.2 | 16.3   | 16.3  | 16.3 | 14.7   | 14.7  | 14.7 | 12.5   | 12.6  | 12.7 | 140 |     |
| 145 | 12     | 12.1  |      | 16.6   | 16.7  | 16.9 | 15.5   | 16.5  | 17.3 | 15.6   | 15.6  | 15.7 | 14.1   | 14.1  | 14.1 | 11.9   | 12.1  | 12.2 | 145 |     |
| 150 | 11.4   | 11.5  |      | 15.7   | 16    | 16.2 | 14.3   | 15.2  | 15.8 | 14.5   | 15    | 15.1 | 13.6   | 13.5  | 13.6 | 11.4   | 11.5  | 11.7 | 150 |     |
| 155 | 11     |       |      | 14.6   | 15.2  | 15.4 | 13.6   | 14    | 14.5 | 13.4   | 14.2  | 14.5 | 13     | 13    | 13.1 | 10.9   | 11    | 11.2 | 155 |     |
| 160 | 9.9    |       |      | 13.5   | 14    |      | 13     | 13.1  | 13.3 | 12.3   | 13.2  | 13.7 | 12.5   | 12.5  | 12.6 | 10.4   | 10.5  | 10.7 | 160 |     |
| 165 |        |       |      | 12.6   | 12.9  |      | 12.4   | 12.6  | 12.7 | 11.4   | 12.1  | 12.6 | 11.8   | 12.1  | 12.1 | 10     | 10.1  | 10.3 | 165 |     |
| 170 |        |       |      | 10.9   | 11.6  |      | 11.7   | 12    | 12.2 | 10.9   | 11.1  | 11.5 | 10.9   | 11.5  | 11.7 | 9.5    | 9.7   | 9.8  | 170 |     |
| 175 |        |       |      | 5.4    |       |      | 10.9   | 11.3  |      | 10.5   | 10.6  | 10.7 | 10     | 10.7  | 11.2 | 9.2    | 9.3   | 9.4  | 175 |     |
| 180 |        |       |      |        |       |      | 10     | 9.3   |      | 10     | 10.2  | 10.3 | 9.3    | 9.8   | 10.3 | 8.8    | 8.9   | 9.1  | 180 |     |
| 185 |        |       |      |        |       |      | 8.5    | 9     |      | 9.7    | 9.8   |      | 8.6    | 9.1   | 9.4  | 8.4    | 8.6   | 8.7  | 185 |     |
| 190 |        |       |      |        |       |      |        |       |      | 9.1    | 9.4   |      | 8      | 8.4   | 8.7  | 7.8    | 8.2   | 8.4  | 190 |     |
| 195 |        |       |      |        |       |      |        |       |      |        |       | 8.3  |        | 7.4   | 7.8  | 8      | 7.2   | 7.7  | 8   | 195 |
| 200 |        |       |      |        |       |      |        |       |      |        |       | 5.4  |        | 6.9   | 7.2  | 7.3    | 6.6   | 7.1  | 7.3 | 200 |
| 205 |        |       |      |        |       |      |        |       |      |        |       |      |        | 6.4   | 6.6  | 6.6    | 6.1   | 6.5  | 6.7 | 205 |
| 210 |        |       |      |        |       |      |        |       |      |        |       |      |        | 5.3   | 6    |        | 5.6   | 6    | 6   | 210 |
| 215 |        |       |      |        |       |      |        |       |      |        |       |      |        |       | 2.2  |        |       | 5.1  | 5.4 | 215 |
| 220 |        |       |      |        |       |      |        |       |      |        |       |      |        |       |      | 4.6    |       |      | 220 |     |
| 225 |        |       |      |        |       |      |        |       |      |        |       |      |        |       |      | 2.5    |       |      | 225 |     |

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# Lifting capacities

## Forces de levage

**TNZK**



| ft  | 44 ft |       |      | 58 ft |       |      | 72 ft |       |      | 86 ft |       |      | 100 ft |       |      | 114 ft |       |      | ft  |  |
|-----|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|--------|-------|------|--------|-------|------|-----|--|
|     | 40 ft |       |      | 40 ft |       |      | 40 ft |       |      | 40 ft |       |      | 40 ft  |       |      | 40 ft  |       |      |     |  |
|     | 0°    | 22.5° | 45°  | 0°    | 22.5° | 45°  | 0°    | 22.5° | 45°  | 0°    | 22.5° | 45°  | 0°     | 22.5° | 45°  | 0°     | 22.5° | 45°  |     |  |
| 10  | 46.1  |       |      |       |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 10  |  |
| 11  | 46.1  |       |      | 46.1  |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 11  |  |
| 12  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      |       |       |      |        |       |      |        |       |      | 12  |  |
| 13  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      |       |       |      |        |       |      |        |       |      | 13  |  |
| 14  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      |       |       |      |        |       |      |        |       |      | 14  |  |
| 15  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      |       |       |      |        |       |      |        |       |      | 15  |  |
| 16  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      |        |       |      |        |       |      | 16  |  |
| 17  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      |        |       |      |        |       |      | 17  |  |
| 18  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      |        |       |      |        |       |      | 18  |  |
| 19  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1   |       |      |        |       |      | 19  |  |
| 20  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1   |       |      |        |       |      | 20  |  |
| 22  | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1   |       |      |        |       |      | 22  |  |
| 24  | 46.1  | 36.8  |      | 46.1  |       |      | 46.1  |       |      | 46.1  |       |      | 46.1   |       |      | 46.1   |       |      | 24  |  |
| 26  | 46.1  | 35    |      | 46.1  | 36.6  |      | 46.1  |       |      | 46.1  |       |      | 46.1   |       |      | 46.1   |       |      | 26  |  |
| 28  | 46.1  | 33.3  |      | 46.1  | 35.1  |      | 46.1  |       |      | 46.1  |       |      | 46.1   |       |      | 46.1   |       |      | 28  |  |
| 30  | 45.7  | 31.8  |      | 46.1  | 33.7  |      | 46.1  | 34.5  |      | 46.1  |       |      | 46.1   |       |      | 46.1   |       |      | 30  |  |
| 32  | 44.4  | 30.5  |      | 46.1  | 32.4  |      | 46.1  | 33.3  |      | 46.1  |       |      | 46.1   |       |      | 46.1   |       |      | 32  |  |
| 34  | 42.9  | 29.3  | 23.2 | 46.1  | 31.2  |      | 46.1  | 32.2  |      | 46.1  | 33.2  |      | 46     |       |      | 45.8   |       |      | 34  |  |
| 36  | 41.4  | 28.2  | 23.2 | 45.9  | 30.1  | 23.2 | 46    | 31.2  |      | 46.1  | 32.2  |      | 45.3   | 32.6  |      | 45.3   |       |      | 36  |  |
| 38  | 39.5  | 27.2  | 23.1 | 44.7  | 29.1  | 23.2 | 45.8  | 30.2  |      | 45.6  | 31.3  |      | 44.5   | 31.7  |      | 44.5   |       |      | 38  |  |
| 40  | 37.3  | 26.2  | 22.7 | 43    | 28.2  | 23.2 | 44.5  | 29.3  | 23.2 | 45.1  | 30.4  |      | 43.2   | 30.9  |      | 43.5   | 31.5  |      | 40  |  |
| 45  | 32.5  | 24.1  | 21.5 | 38.5  | 26    | 22.3 | 40.7  | 27.3  | 22.7 | 43.2  | 28.4  |      | 39.6   | 29    |      | 40.3   | 29.7  |      | 45  |  |
| 50  | 28.7  | 22.3  | 20.5 | 34.3  | 24.3  | 21.3 | 37.2  | 25.6  | 21.8 | 39.9  | 26.7  | 22.3 | 36.3   | 27.4  | 22.6 | 37.4   | 28.1  |      | 50  |  |
| 55  | 25.6  | 20.8  | 19.8 | 30.8  | 22.7  | 20.5 | 33.9  | 24.1  | 21.1 | 36.9  | 25.3  | 21.6 | 33.5   | 26    | 21.8 | 34.8   | 26.6  | 22.1 | 55  |  |
| 60  | 23.2  | 19.5  | 19.2 | 27.8  | 21.4  | 19.9 | 31.2  | 22.8  | 20.4 | 34.2  | 23.9  | 20.9 | 31     | 24.7  | 21.2 | 32.4   | 25.4  | 21.5 | 60  |  |
| 65  | 21    | 18.5  | 19   | 25.3  | 20.2  | 19.4 | 28.8  | 21.6  | 19.9 | 31.8  | 22.8  | 20.4 | 28.9   | 23.5  | 20.7 | 30.3   | 24.3  | 21   | 65  |  |
| 70  | 19.2  | 17.6  | 10.4 | 23.3  | 19.2  | 19.1 | 26.6  | 20.6  | 19.5 | 29.5  | 21.8  | 19.9 | 26.8   | 22.5  | 20.2 | 28.5   | 23.3  | 20.5 | 70  |  |
| 75  | 17.6  | 17.4  |      | 21.4  | 18.4  | 19   | 24.7  | 19.7  | 19.1 | 27.5  | 20.9  | 19.5 | 25.1   | 21.7  | 19.8 | 26.8   | 22.4  | 20.1 | 75  |  |
| 80  |       |       |      | 19.8  | 17.7  |      | 22.9  | 18.9  | 19   | 25.7  | 20.1  | 19.2 | 23.4   | 20.8  | 19.5 | 25.2   | 21.6  | 19.8 | 80  |  |
| 85  |       |       |      | 18.5  | 17.3  |      | 21.4  | 18.3  | 18.9 | 24.2  | 19.3  | 19.1 | 22     | 20.1  | 19.3 | 23.8   | 20.9  | 19.5 | 85  |  |
| 90  |       |       |      | 17.3  |       |      | 20.1  | 17.7  | 18.9 | 22.7  | 18.7  | 19   | 20.6   | 19.4  | 19   | 22.4   | 20.2  | 19.3 | 90  |  |
| 95  |       |       |      |       |       |      | 18.9  | 17.4  |      | 21.4  | 18.2  | 19   | 19.4   | 18.8  | 18.7 | 21.2   | 19.7  | 19.1 | 95  |  |
| 100 |       |       |      |       |       |      | 17.9  | 17.3  |      | 20.2  | 17.7  | 19   | 18.3   | 18    | 18.1 | 20.1   | 19    | 18.9 | 100 |  |
| 105 |       |       |      |       |       |      |       |       |      | 19.2  | 17.4  | 19   | 17.3   | 17.1  | 17.3 | 19.1   | 18.4  | 18.3 | 105 |  |
| 110 |       |       |      |       |       |      |       |       |      | 18.3  | 17.3  |      | 16.3   | 16.2  | 16.5 | 18.1   | 17.7  | 17.6 | 110 |  |
| 115 |       |       |      |       |       |      |       |       |      | 17.5  |       |      | 15.5   | 15.4  | 15.7 | 17.3   | 16.9  | 17   | 115 |  |
| 120 |       |       |      |       |       |      |       |       |      |       |       |      | 14.7   | 14.7  |      | 16.5   | 16.2  | 16.4 | 120 |  |
| 125 |       |       |      |       |       |      |       |       |      |       |       |      | 14.1   | 14.1  |      | 15.7   | 15.6  | 15.8 | 125 |  |
| 130 |       |       |      |       |       |      |       |       |      |       |       |      | 13.5   |       |      | 15.1   | 15    | 15.2 | 130 |  |
| 135 |       |       |      |       |       |      |       |       |      |       |       |      | 14.5   | 14.4  |      | 14     |       |      | 135 |  |
| 140 |       |       |      |       |       |      |       |       |      |       |       |      | 14     |       |      | 13.5   |       |      | 140 |  |
| 145 |       |       |      |       |       |      |       |       |      |       |       |      | 13.5   |       |      |        |       |      | 145 |  |

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# Lifting capacities

## Forces de levage

**TNZK**

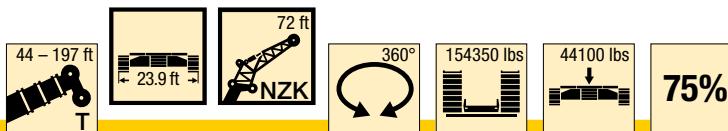
|     |      | 44 - 197 ft |       |      | 40 ft  |       |      | 360°   |       |      | 154350 lbs |       |      | 44100 lbs |       |      | 75%    |       |      |      |      |     |
|-----|------|-------------|-------|------|--------|-------|------|--------|-------|------|------------|-------|------|-----------|-------|------|--------|-------|------|------|------|-----|
|     |      | 128 ft      |       |      | 142 ft |       |      | 156 ft |       |      | 171 ft     |       |      | 185 ft    |       |      | 197 ft |       |      |      |      |     |
|     |      | 40 ft       |       |      | 40 ft  |       |      | 40 ft  |       |      | 40 ft      |       |      | 40 ft     |       |      | 40 ft  |       |      |      |      |     |
|     |      | 0°          | 22.5° | 45°  | 0°     | 22.5° | 45°  | 0°     | 22.5° | 45°  | 0°         | 22.5° | 45°  | 0°        | 22.5° | 45°  | 0°     | 22.5° | 45°  |      |      |     |
| 30  | 42.6 |             |       |      | 45.3   |       |      |        |       |      |            |       |      |           |       |      |        |       |      | 30   |      |     |
| 32  | 42.4 |             |       |      | 45.1   |       |      |        |       |      |            |       |      |           |       |      |        |       |      | 32   |      |     |
| 34  | 42.2 |             |       |      | 44.9   |       |      |        |       |      |            |       |      |           |       |      |        |       |      | 34   |      |     |
| 36  | 41.9 |             |       |      | 44.6   |       |      | 40.4   |       |      |            |       |      |           |       |      |        |       | 36   |      |      |     |
| 38  | 41.7 |             |       |      | 44.3   |       |      | 40.2   |       |      |            |       |      |           |       |      |        |       | 38   |      |      |     |
| 40  | 41.2 |             |       |      | 44     |       |      | 40     |       |      | 34.7       |       |      |           |       |      |        |       | 40   |      |      |     |
| 45  | 38.8 |             |       |      | 43     |       |      | 39.3   |       |      | 34.3       |       |      |           |       |      |        |       | 45   |      |      |     |
| 50  | 36   | 28.3        |       |      | 41.8   | 30.5  |      | 38.6   |       |      | 33.9       |       |      | 28.5      |       |      |        |       |      | 50   |      |     |
| 55  | 33.6 | 27          | 22.2  | 40.6 | 29     |       | 37.8 | 29.3   |       | 33.5 |            |       | 28   |           |       |      |        |       | 24   |      | 55   |     |
| 60  | 31.4 | 25.7        | 21.7  | 39.4 | 27.6   | 22.3  | 37   | 27.9   | 22.6  | 32.9 | 27.6       |       | 27.6 |           |       |      |        |       | 23.6 |      | 60   |     |
| 65  | 29.3 | 24.7        | 21.1  | 37.8 | 26.4   | 21.8  | 36.1 | 26.8   | 22    | 32.1 | 26.5       |       | 27.3 |           |       |      |        |       | 23.2 | 22.2 | 65   |     |
| 70  | 27.4 | 23.7        | 20.7  | 36   | 25.3   | 21.3  | 34.9 | 25.7   | 21.5  | 31   | 25.5       | 21.5  | 26.8 | 24.8      |       |      |        |       | 22.9 | 22   | 70   |     |
| 75  | 25.7 | 22.9        | 20.3  | 34.1 | 24.4   | 20.9  | 33.6 | 24.8   | 21.1  | 29.7 | 24.5       | 21    | 25.8 | 24        | 20.9  |      |        |       | 22.5 | 21.6 | 75   |     |
| 80  | 24.2 | 22.1        | 19.9  | 32.2 | 23.5   | 20.5  | 32.1 | 23.9   | 20.7  | 28.2 | 23.7       | 20.6  | 24.8 | 23.2      | 20.6  |      |        |       | 21.6 | 20.7 | 19.7 | 80  |
| 85  | 22.7 | 21.3        | 19.7  | 30.4 | 22.8   | 20.2  | 30.5 | 23.1   | 20.4  | 26.9 | 23         | 20.3  | 23.7 | 22.5      | 20.2  |      |        |       | 20.6 | 20   | 19   | 85  |
| 90  | 21.4 | 20.5        | 19.4  | 28.8 | 22     | 19.9  | 29   | 22.4   | 20.1  | 25.7 | 22.3       | 20.1  | 22.7 | 21.7      | 20    |      |        |       | 19.7 | 19.2 | 18.3 | 90  |
| 95  | 20.2 | 19.7        | 19.1  | 27.2 | 21.4   | 19.6  | 27.3 | 21.8   | 19.8  | 24.5 | 21.7       | 19.8  | 21.7 | 20.9      | 19.7  |      |        |       | 18.9 | 18.5 | 17.7 | 95  |
| 100 | 19.1 | 18.8        | 18.8  | 25.8 | 20.8   | 19.4  | 25.4 | 21.2   | 19.6  | 23.3 | 21.2       | 19.6  | 20.8 | 20.2      | 19.3  |      |        |       | 18.1 | 17.8 | 17.1 | 100 |
| 105 | 18.1 | 17.8        | 17.9  | 24.5 | 20.2   | 19.2  | 23.3 | 20.6   | 19.4  | 22.3 | 20.6       | 19.4  | 19.9 | 19.4      | 18.7  |      |        |       | 17.2 | 17.1 | 16.5 | 105 |
| 110 | 17.1 | 16.9        | 17.1  | 22.6 | 19.7   | 19.1  | 21.3 | 20.1   | 19.2  | 21.2 | 20.1       | 19.3  | 19   | 18.7      | 18.1  |      |        |       | 16.5 | 16.4 | 16   | 110 |
| 115 | 16.2 | 16.1        | 16.3  | 20.8 | 19.3   | 19    | 19.9 | 19.7   | 19.1  | 19.6 | 19.5       | 19    | 18.2 | 18        | 17.5  |      |        |       | 15.7 | 15.8 | 15.5 | 115 |
| 120 | 15.4 | 15.3        | 15.5  | 19.1 | 18.8   | 18.9  | 18.9 | 19     | 19    | 18   | 18.9       | 18.6  | 17.5 | 17.3      | 16.9  | 15   |        |       | 15.1 | 14.9 | 120  |     |
| 125 | 14.6 | 14.6        | 14.8  | 17.5 | 18.4   | 18.9  | 17.7 | 17.9   | 18.7  | 16.4 | 17.8       | 18.1  | 16.7 | 16.6      | 16.4  | 14.4 |        |       | 14.4 | 14.4 | 125  |     |
| 130 | 13.9 | 13.9        | 14.1  | 16.1 | 17.2   | 18    | 16.3 | 17.1   | 17.2  | 15.7 | 16.4       | 17.3  | 15.5 | 15.9      | 15.8  | 13.7 |        |       | 13.8 | 13.8 | 130  |     |
| 135 | 13.2 | 13.3        | 13.5  | 14.8 | 15.8   | 16.5  | 15   | 16.1   | 16.5  | 14.9 | 15         | 16    | 14.2 | 15.3      | 15.2  | 13.1 |        |       | 13.2 | 13.3 | 135  |     |
| 140 | 12.5 | 12.6        | 12.9  | 13.8 | 14.5   | 15.1  | 13.8 | 14.8   | 15.6  | 14.2 | 14.3       | 14.6  | 13   | 14.2      | 14.7  | 12.4 |        |       | 12.6 | 12.7 | 140  |     |
| 145 | 12   | 12.1        |       | 13.2 | 13.3   | 13.8  | 12.7 | 13.6   | 14.3  | 13.1 | 13.7       | 13.8  | 11.9 | 13        | 13.9  | 11.6 |        |       | 12.1 | 12.2 | 145  |     |
| 150 | 11.4 | 11.5        |       | 12.7 | 12.7   | 12.9  | 12.1 | 12.5   | 13.1  | 12.1 | 13         | 13.2  | 10.8 | 11.9      | 12.8  | 10.6 |        |       | 11.5 | 11.7 | 150  |     |
| 155 | 11   |             |       | 12.2 | 12.2   | 12.4  | 11.5 | 11.7   | 11.9  | 11.1 | 12         | 12.5  | 9.9  | 10.9      | 11.7  | 9.7  |        |       | 10.7 | 11.2 | 155  |     |
| 160 | 9.9  |             |       | 11.7 | 11.8   |       | 10.9 | 11.1   | 11.3  | 10.2 | 11         | 11.6  | 8.9  | 9.9       | 10.6  | 8.8  |        |       | 9.7  | 10.6 | 160  |     |
| 165 |      |             |       | 11.3 | 11.4   |       | 10.3 | 10.6   | 10.8  | 9.4  | 10.1       | 10.5  | 8.1  | 9         | 9.6   | 7.9  |        |       | 8.8  | 9.6  | 165  |     |
| 170 |      |             |       | 10.8 | 11     |       | 9.6  | 10     | 10.2  | 8.6  | 9.2        | 9.6   | 7.3  | 8.1       | 8.7   | 7.1  |        |       | 8    | 8.7  | 170  |     |
| 175 |      |             |       | 5.4  |        |       | 8.9  | 9.3    |       | 7.9  | 8.4        | 8.7   | 6.6  | 7.3       | 7.8   | 6.4  |        |       | 7.2  | 7.8  | 175  |     |
| 180 |      |             |       |      |        |       | 8.2  | 8.5    |       | 7.2  | 7.7        | 7.9   | 5.9  | 6.6       | 7     | 5.7  |        |       | 6.4  | 7    | 180  |     |
| 185 |      |             |       |      |        |       | 7.6  | 7.8    |       | 6.5  | 7          |       | 5.3  | 5.8       | 6.2   | 5    |        |       | 5.7  | 6.2  | 185  |     |
| 190 |      |             |       |      |        |       |      |        |       | 6    | 6.3        |       | 4.7  | 5.2       | 5.4   | 4.4  |        |       | 5    | 5.5  | 190  |     |
| 195 |      |             |       |      |        |       |      |        |       |      | 5.4        |       | 4.1  | 4.5       | 4.7   | 3.9  |        |       | 4.4  | 4.8  | 195  |     |
| 200 |      |             |       |      |        |       |      |        |       |      | 4.9        |       | 3.6  | 3.9       | 4     | 3.3  |        |       | 3.8  | 4.1  | 200  |     |
| 205 |      |             |       |      |        |       |      |        |       |      |            |       | 3.1  | 3.4       | 3.3   | 2.8  |        |       | 3.2  | 3.4  | 205  |     |
| 210 |      |             |       |      |        |       |      |        |       |      |            |       | 2.6  | 2.8       |       | 2.3  |        |       | 2.7  | 2.8  | 210  |     |
| 215 |      |             |       |      |        |       |      |        |       |      |            |       | 2.1  |           |       | 1.9  |        |       | 2.2  |      | 215  |     |
| 220 |      |             |       |      |        |       |      |        |       |      |            |       | 1.4  |           |       |      |        |       |      |      | 220  |     |

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# Lifting capacities

## Forces de levage

**TNZK**



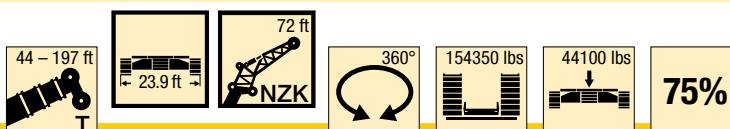
| ft  | 44 ft |       |      | 58 ft |       |      | 72 ft |       |      | 86 ft |       |      | 100 ft |       |      | 114 ft |       |      | ft  |  |
|-----|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|--------|-------|------|--------|-------|------|-----|--|
|     | 72 ft |       |      | 72 ft |       |      | 72 ft |       |      | 72 ft |       |      | 72 ft  |       |      | 72 ft  |       |      |     |  |
|     | 0°    | 22.5° | 45°  | 0°    | 22.5° | 45°  | 0°    | 22.5° | 45°  | 0°    | 22.5° | 45°  | 0°     | 22.5° | 45°  | 0°     | 22.5° | 45°  |     |  |
| 12  | 21.8  |       |      |       |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 12  |  |
| 13  | 22    |       |      |       |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 13  |  |
| 14  | 22.2  |       |      |       |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 14  |  |
| 15  | 22.2  |       |      |       |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 15  |  |
| 16  | 22.2  |       |      | 21.5  |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 16  |  |
| 17  | 22.1  |       |      | 21.5  |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 17  |  |
| 18  | 22.1  |       |      | 21.5  |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 18  |  |
| 19  | 22    |       |      | 21.5  |       |      | 20.5  |       |      |       |       |      |        |       |      |        |       |      | 19  |  |
| 20  | 21.9  |       |      | 21.4  |       |      | 20.5  |       |      |       |       |      |        |       |      |        |       |      | 20  |  |
| 22  | 21.7  |       |      | 21.3  |       |      | 20.5  |       |      | 19.9  |       |      |        |       |      |        |       |      | 22  |  |
| 24  | 21.6  |       |      | 21.2  |       |      | 20.4  |       |      | 19.9  |       |      |        |       |      |        |       |      | 24  |  |
| 26  | 21.3  |       |      | 21    |       |      | 20.3  |       |      | 19.8  |       |      | 19     |       |      |        |       |      | 26  |  |
| 28  | 21.1  |       |      | 20.8  |       |      | 20.2  |       |      | 19.7  |       |      | 18.9   |       |      |        |       |      | 28  |  |
| 30  | 20.9  |       |      | 20.7  |       |      | 20    |       |      | 19.6  |       |      | 18.9   |       |      | 18.3   |       |      | 30  |  |
| 32  | 20.6  |       |      | 20.5  |       |      | 19.9  |       |      | 19.5  |       |      | 18.8   |       |      | 18.3   |       |      | 32  |  |
| 34  | 20.3  |       |      | 20.3  |       |      | 19.7  |       |      | 19.4  |       |      | 18.7   |       |      | 18.2   |       |      | 34  |  |
| 36  | 20    |       |      | 20    |       |      | 19.5  |       |      | 19.2  |       |      | 18.6   |       |      | 18.1   |       |      | 36  |  |
| 38  | 19.7  |       |      | 19.7  |       |      | 19.3  |       |      | 19.1  |       |      | 18.4   |       |      | 18     |       |      | 38  |  |
| 40  | 19.3  | 16.6  |      | 19.5  |       |      | 19.1  |       |      | 18.9  |       |      | 18.3   |       |      | 17.9   |       |      | 40  |  |
| 45  | 18.4  | 15.7  |      | 18.7  | 15.8  |      | 18.5  |       |      | 18.4  |       |      | 17.9   |       |      | 17.5   |       |      | 45  |  |
| 50  | 17.5  | 14.9  |      | 17.9  | 15.1  |      | 17.9  |       |      | 17.8  |       |      | 17.4   |       |      | 17.2   |       |      | 50  |  |
| 55  | 16.5  | 14.1  |      | 17.2  | 14.4  |      | 17.3  | 14.4  |      | 17.3  | 14.4  |      | 17     |       |      | 16.8   |       |      | 55  |  |
| 60  | 15.6  | 13.3  | 11.3 | 16.4  | 13.7  |      | 16.6  | 13.8  |      | 16.8  | 13.9  |      | 16.6   | 13.8  |      | 16.4   | 13.8  |      | 60  |  |
| 65  | 14.7  | 12.7  | 10.9 | 15.6  | 13.1  | 11   | 16    | 13.3  | 11   | 16.2  | 13.4  |      | 16.1   | 13.4  |      | 16     | 13.3  |      | 65  |  |
| 70  | 13.9  | 12.1  | 10.5 | 14.8  | 12.5  | 10.7 | 15.3  | 12.7  | 10.7 | 15.7  | 12.9  |      | 15.6   | 12.9  |      | 15.6   | 13    |      | 70  |  |
| 75  | 13.1  | 11.6  | 10.3 | 14.1  | 12    | 10.4 | 14.7  | 12.3  | 10.4 | 15.1  | 12.5  | 10.5 | 15.2   | 12.5  | 10.4 | 15.2   | 12.6  |      | 75  |  |
| 80  | 12.4  | 11.1  | 10   | 13.4  | 11.6  | 10.1 | 14    | 11.9  | 10.2 | 14.6  | 12.1  | 10.2 | 14.7   | 12.2  | 10.2 | 14.8   | 12.2  | 10.2 | 80  |  |
| 85  | 11.6  | 10.7  | 9.8  | 12.7  | 11.2  | 9.9  | 13.4  | 11.5  | 10   | 14    | 11.7  | 10.1 | 14.2   | 11.8  | 10.1 | 14.4   | 11.9  | 10   | 85  |  |
| 90  | 10.8  | 10.3  | 9.7  | 12.1  | 10.8  | 9.8  | 12.8  | 11.1  | 9.8  | 13.4  | 11.4  | 9.9  | 13.7   | 11.5  | 9.9  | 14     | 11.6  | 9.9  | 90  |  |
| 95  | 10.1  | 10    | 9.7  | 11.5  | 10.4  | 9.7  | 12.3  | 10.8  | 9.7  | 12.9  | 11.1  | 9.8  | 13.3   | 11.2  | 9.8  | 13.6   | 11.3  | 9.8  | 95  |  |
| 100 | 9.4   | 9.8   | 9.7  | 10.9  | 10.2  | 9.7  | 11.8  | 10.5  | 9.6  | 12.5  | 10.8  | 9.7  | 12.8   | 10.9  | 9.7  | 13.1   | 11.1  | 9.7  | 100 |  |
| 105 | 8.9   | 9.7   |      | 10.2  | 9.9   | 9.7  | 11.3  | 10.2  | 9.6  | 12    | 10.5  | 9.6  | 12.4   | 10.6  | 9.6  | 12.7   | 10.8  | 9.6  | 105 |  |
| 110 |       |       |      | 9.6   | 9.8   | 9.7  | 10.8  | 10    | 9.6  | 11.6  | 10.3  | 9.6  | 12     | 10.4  | 9.5  | 12.4   | 10.6  | 9.5  | 110 |  |
| 115 |       |       |      | 9.2   | 9.7   |      | 10.2  | 9.8   | 9.6  | 11.1  | 10    | 9.6  | 11.6   | 10.2  | 9.5  | 12     | 10.4  | 9.5  | 115 |  |
| 120 |       |       |      | 8.8   | 9.7   |      | 9.7   | 9.7   | 9.6  | 10.7  | 9.9   | 9.6  | 11.2   | 10    | 9.5  | 11.6   | 10.2  | 9.4  | 120 |  |
| 125 |       |       |      |       | 9.3   | 9.6  | 9.6   | 10.3  | 9.7  | 9.6   | 10.9  | 9.9  | 9.5    | 11.3  | 10   | 9.4    |       |      | 125 |  |
| 130 |       |       |      |       |       | 9    | 9.6   |       | 9.8  | 9.6   | 9.6   | 10.5 | 9.7    | 9.5   | 11   | 9.8    | 9.4   |      | 130 |  |
| 135 |       |       |      |       |       | 8.6  | 9.6   |       | 9.4  | 9.6   | 9.6   | 10.1 | 9.6    | 9.5   | 10.7 | 9.7    | 9.4   |      | 135 |  |
| 140 |       |       |      |       |       |      |       |       | 9.1  | 9.6   | 9.6   | 9.8  | 9.5    | 9.5   | 10.4 | 9.6    | 9.4   |      | 140 |  |
| 145 |       |       |      |       |       |      |       |       | 8.8  | 9.6   |       | 9.5  | 9.5    | 9.5   | 10.1 | 9.5    | 9.4   |      | 145 |  |
| 150 |       |       |      |       |       |      |       |       | 8.6  |       |       | 9.2  | 9.5    | 9.5   | 9.8  | 9.5    | 9.4   |      | 150 |  |
| 155 |       |       |      |       |       |      |       |       |      |       |       | 8.9  | 9.2    |       | 9.5  | 9.4    | 9.4   |      | 155 |  |
| 160 |       |       |      |       |       |      |       |       |      |       |       | 8.7  | 9.1    |       | 9.2  | 9.4    | 9.4   |      | 160 |  |
| 165 |       |       |      |       |       |      |       |       |      |       |       |      | 9      | 9.3   | 9.4  |        |       |      | 165 |  |
| 170 |       |       |      |       |       |      |       |       |      |       |       |      |        | 8.8   | 9.2  |        |       |      | 170 |  |
| 175 |       |       |      |       |       |      |       |       |      |       |       |      |        | 8.6   | 9.1  |        |       |      | 175 |  |

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# Lifting capacities

## Forces de levage

**TNZK**



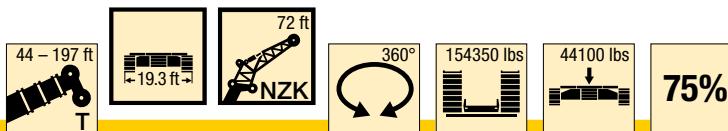
| ft  | 128 ft |       |     | 142 ft |       |      | 156 ft |       |      | 171 ft |       |     | 185 ft |       |     | 197 ft |       |     | ft  |  |
|-----|--------|-------|-----|--------|-------|------|--------|-------|------|--------|-------|-----|--------|-------|-----|--------|-------|-----|-----|--|
|     | 72 ft  |       |     | 72 ft  |       |      | 72 ft  |       |      | 72 ft  |       |     | 72 ft  |       |     | 72 ft  |       |     |     |  |
|     | 0°     | 22.5° | 45° | 0°     | 22.5° | 45°  | 0°     | 22.5° | 45°  | 0°     | 22.5° | 45° | 0°     | 22.5° | 45° | 0°     | 22.5° | 45° |     |  |
| 32  | 17.5   |       |     | 18.2   |       |      |        |       |      |        |       |     |        |       |     |        |       |     | 32  |  |
| 34  | 17.5   |       |     | 18.2   |       |      |        |       |      |        |       |     |        |       |     |        |       |     | 34  |  |
| 36  | 17.4   |       |     | 18.1   |       |      |        |       |      |        |       |     |        |       |     |        |       |     | 36  |  |
| 38  | 17.3   |       |     | 18     |       |      |        |       |      |        |       |     |        |       |     |        |       |     | 38  |  |
| 40  | 17.2   |       |     | 17.9   |       |      | 17.2   |       |      |        |       |     | 15.6   |       |     |        |       |     | 40  |  |
| 45  | 16.9   |       |     | 17.6   |       |      | 16.9   |       |      |        |       |     | 15.8   |       |     |        |       |     | 45  |  |
| 50  | 16.6   |       |     | 17.3   |       |      | 16.7   |       |      |        |       |     |        |       |     |        |       |     | 50  |  |
| 55  | 16.3   |       |     | 17     |       |      | 16.4   |       |      |        |       |     | 15.4   |       |     | 14.1   |       |     | 55  |  |
| 60  | 16     |       |     | 16.7   |       |      | 16.2   |       |      |        |       |     | 15.2   |       |     | 13.9   |       |     | 60  |  |
| 65  | 15.7   | 13.2  |     | 16.4   | 13.7  |      | 15.9   |       |      |        |       |     | 14.9   |       |     | 13.8   |       |     | 65  |  |
| 70  | 15.3   | 12.8  |     | 16     | 13.3  |      | 15.6   |       |      |        |       |     | 14.7   |       |     | 13.6   |       |     | 70  |  |
| 75  | 15     | 12.5  |     | 15.7   | 13    |      | 15.3   | 12.8  |      |        |       |     | 14.5   | 12.4  |     | 13.4   |       |     | 75  |  |
| 80  | 14.6   | 12.2  |     | 15.4   | 12.6  |      | 15     | 12.5  |      |        |       |     | 14.3   | 12.1  |     | 13.2   | 11.5  |     | 80  |  |
| 85  | 14.3   | 11.9  | 10  | 15     | 12.3  | 10.2 | 14.7   | 12.2  | 10.1 |        |       |     | 14     | 11.8  |     | 13     | 11.3  |     | 85  |  |
| 90  | 13.9   | 11.6  | 9.9 | 14.7   | 12    | 10   | 14.4   | 12    | 10   |        |       |     | 13.7   | 11.6  |     | 12.8   | 11.1  |     | 90  |  |
| 95  | 13.6   | 11.3  | 9.8 | 14.3   | 11.8  | 9.9  | 14.1   | 11.7  | 9.8  |        |       |     | 13.5   | 11.4  | 9.7 | 12.6   | 10.9  |     | 95  |  |
| 100 | 13.2   | 11.1  | 9.6 | 13.9   | 11.5  | 9.8  | 13.8   | 11.4  | 9.7  |        |       |     | 13.2   | 11.2  | 9.6 | 12.4   | 10.7  | 9.4 | 100 |  |
| 105 | 12.8   | 10.8  | 9.6 | 13.6   | 11.3  | 9.7  | 13.4   | 11.2  | 9.6  |        |       |     | 12.9   | 11    | 9.5 | 12.2   | 10.6  | 9.3 | 105 |  |
| 110 | 12.4   | 10.6  | 9.5 | 13.2   | 11    | 9.6  | 13.1   | 11    | 9.5  |        |       |     | 12.7   | 10.8  | 9.4 | 12     | 10.4  | 9.3 | 110 |  |
| 115 | 12.1   | 10.4  | 9.4 | 12.8   | 10.8  | 9.5  | 12.8   | 10.8  | 9.5  |        |       |     | 12.4   | 10.6  | 9.4 | 11.7   | 10.2  | 9.2 | 115 |  |
| 120 | 11.8   | 10.2  | 9.4 | 12.5   | 10.6  | 9.4  | 12.5   | 10.6  | 9.4  |        |       |     | 12.1   | 10.4  | 9.3 | 11.5   | 10.1  | 9.2 | 120 |  |
| 125 | 11.5   | 10.1  | 9.4 | 12.2   | 10.4  | 9.4  | 12.2   | 10.4  | 9.3  |        |       |     | 11.9   | 10.3  | 9.3 | 11.3   | 10    | 9.1 | 125 |  |
| 130 | 11.2   | 9.9   | 9.4 | 11.9   | 10.2  | 9.4  | 11.9   | 10.2  | 9.3  |        |       |     | 11.7   | 10.1  | 9.2 | 11.1   | 9.8   | 9.1 | 130 |  |
| 135 | 10.9   | 9.8   | 9.4 | 11.6   | 10.1  | 9.3  | 11.7   | 10.1  | 9.3  |        |       |     | 11.4   | 10    | 9.2 | 11     | 9.7   | 9.1 | 135 |  |
| 140 | 10.6   | 9.7   | 9.4 | 11.3   | 9.9   | 9.3  | 11.4   | 9.9   | 9.2  |        |       |     | 11.2   | 9.8   | 9.2 | 10.8   | 9.6   | 9   | 140 |  |
| 145 | 10.3   | 9.6   | 9.4 | 11     | 9.8   | 9.3  | 11.1   | 9.8   | 9.2  |        |       |     | 11     | 9.7   | 9.2 | 10.6   | 9.5   | 9   | 145 |  |
| 150 | 9.9    | 9.5   | 9.4 | 10.8   | 9.6   | 9.3  | 10.9   | 9.7   | 9.2  |        |       |     | 10.8   | 9.6   | 9.2 | 10.4   | 9.4   | 9   | 150 |  |
| 155 | 9.5    | 9.4   | 9.4 | 10.5   | 9.5   | 9.3  | 10.7   | 9.6   | 9.2  |        |       |     | 10.6   | 9.5   | 9.2 | 10.2   | 9.3   | 9   | 155 |  |
| 160 | 9.2    | 9.2   | 9.4 | 10.3   | 9.5   | 9.3  | 10.4   | 9.5   | 9.2  |        |       |     | 10.4   | 9.4   | 9.2 | 10     | 9.3   | 9   | 160 |  |
| 165 | 8.9    | 9     | 9.2 | 10     | 9.4   | 9.3  | 10.2   | 9.4   | 9.2  |        |       |     | 10.2   | 9.3   | 9.2 | 9.9    | 9.2   | 9   | 165 |  |
| 170 | 8.5    | 8.7   | 8.9 | 9.8    | 9.4   | 9.3  | 10     | 9.3   | 9.2  |        |       |     | 9.8    | 9.2   | 9.7 | 9.1    | 9     | 8.4 | 170 |  |
| 175 | 8.2    | 8.4   | 8.6 | 9.6    | 9.3   | 9.3  | 9.8    | 9.3   | 9.2  |        |       |     | 9.8    | 9.2   | 9.7 | 9.4    | 8.3   | 8.6 | 175 |  |
| 180 | 8      | 8.1   | 8.5 | 9.4    | 9.3   | 9.3  | 9.7    | 9.2   | 9.2  |        |       |     | 9.6    | 9.2   | 9.2 | 9.1    | 9     | 7.8 | 180 |  |
| 185 | 7.7    | 7.9   |     | 9.2    | 9.3   | 9.3  | 9.3    | 9.2   | 9.2  |        |       |     | 9.3    | 9.2   | 9.2 | 8.8    | 8.8   | 9   | 185 |  |
| 190 | 7.5    |       |     | 9      | 9.3   | 8.6  | 9      | 9.2   | 9.2  |        |       |     | 8.7    | 9.1   | 9.2 | 8.6    | 8.6   | 8.9 | 190 |  |
| 195 |        |       |     | 8.8    | 9.3   |      | 8.7    | 8.9   | 9.2  |        |       |     | 8.1    | 8.9   | 9.1 | 8.3    | 8.4   | 8.7 | 195 |  |
| 200 |        |       |     | 7.8    |       |      | 8.4    | 8.6   | 7.6  |        |       |     | 7.7    | 8.3   | 8.6 | 7.7    | 8.2   | 8.5 | 200 |  |
| 205 |        |       |     | 6.3    |       |      | 8.1    | 8.4   | 7.3  |        |       |     | 7.5    | 7.7   | 7.9 | 7.2    | 7.9   | 8.2 | 205 |  |
| 210 |        |       |     |        |       |      | 7.5    | 8     |      |        |       |     | 7.3    | 7.5   | 7.6 | 6.7    | 7.5   | 7.8 | 210 |  |
| 215 |        |       |     |        |       |      | 6.5    |       | 7    |        |       |     | 7.2    | 7.4   | 6.2 | 6.9    | 7.1   | 5.9 | 215 |  |
| 220 |        |       |     |        |       |      | 3.3    |       |      |        |       |     | 6.8    | 7     |     | 5.7    | 6.4   | 6.5 | 220 |  |
| 225 |        |       |     |        |       |      |        |       |      |        |       |     | 6.2    | 6.7   |     | 5      | 5.7   | 5.9 | 225 |  |
| 230 |        |       |     |        |       |      |        |       |      |        |       |     | 4.3    |       |     | 4.8    | 5.4   | 5.2 | 230 |  |
| 235 |        |       |     |        |       |      |        |       |      |        |       |     |        |       |     | 4.4    | 4.9   |     | 235 |  |
| 240 |        |       |     |        |       |      |        |       |      |        |       |     |        |       |     | 3.8    |       | 3.7 | 240 |  |
| 245 |        |       |     |        |       |      |        |       |      |        |       |     |        |       |     |        | 3.3   | 3.7 | 245 |  |
| 250 |        |       |     |        |       |      |        |       |      |        |       |     |        |       |     |        | 2.9   | 3.2 | 250 |  |

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# Lifting capacities

## Forces de levage

**TNZK**



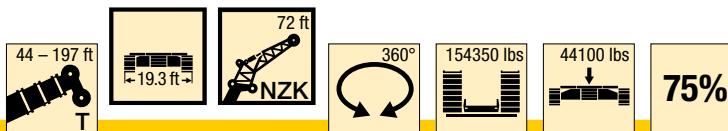
| ft  | 44 ft |       |      | 58 ft |       |      | 72 ft |       |      | 86 ft |       |      | 100 ft |       |      | 114 ft |       |      | ft  |  |
|-----|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|--------|-------|------|--------|-------|------|-----|--|
|     | 72 ft |       |      | 72 ft |       |      | 72 ft |       |      | 72 ft |       |      | 72 ft  |       |      | 72 ft  |       |      |     |  |
|     | 0°    | 22.5° | 45°  | 0°    | 22.5° | 45°  | 0°    | 22.5° | 45°  | 0°    | 22.5° | 45°  | 0°     | 22.5° | 45°  | 0°     | 22.5° | 45°  |     |  |
| 12  | 21.8  |       |      |       |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 12  |  |
| 13  | 22    |       |      |       |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 13  |  |
| 14  | 22.2  |       |      |       |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 14  |  |
| 15  | 22.2  |       |      |       |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 15  |  |
| 16  | 22.2  |       |      | 21.5  |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 16  |  |
| 17  | 22.1  |       |      | 21.5  |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 17  |  |
| 18  | 22.1  |       |      | 21.5  |       |      |       |       |      |       |       |      |        |       |      |        |       |      | 18  |  |
| 19  | 22    |       |      | 21.5  |       |      | 20.5  |       |      |       |       |      |        |       |      |        |       |      | 19  |  |
| 20  | 21.9  |       |      | 21.4  |       |      | 20.5  |       |      |       |       |      |        |       |      |        |       |      | 20  |  |
| 22  | 21.7  |       |      | 21.3  |       |      | 20.5  |       |      | 19.9  |       |      |        |       |      |        |       |      | 22  |  |
| 24  | 21.6  |       |      | 21.2  |       |      | 20.4  |       |      | 19.9  |       |      |        |       |      |        |       |      | 24  |  |
| 26  | 21.3  |       |      | 21    |       |      | 20.3  |       |      | 19.8  |       |      | 19     |       |      |        |       |      | 26  |  |
| 28  | 21.1  |       |      | 20.8  |       |      | 20.2  |       |      | 19.7  |       |      | 18.9   |       |      |        |       |      | 28  |  |
| 30  | 20.9  |       |      | 20.7  |       |      | 20    |       |      | 19.6  |       |      | 18.9   |       |      | 18.3   |       |      | 30  |  |
| 32  | 20.6  |       |      | 20.5  |       |      | 19.9  |       |      | 19.5  |       |      | 18.8   |       |      | 18.3   |       |      | 32  |  |
| 34  | 20.3  |       |      | 20.3  |       |      | 19.7  |       |      | 19.4  |       |      | 18.7   |       |      | 18.2   |       |      | 34  |  |
| 36  | 20    |       |      | 20    |       |      | 19.5  |       |      | 19.2  |       |      | 18.6   |       |      | 18.1   |       |      | 36  |  |
| 38  | 19.7  |       |      | 19.7  |       |      | 19.3  |       |      | 19.1  |       |      | 18.4   |       |      | 18     |       |      | 38  |  |
| 40  | 19.3  | 16.6  |      | 19.5  |       |      | 19.1  |       |      | 18.9  |       |      | 18.3   |       |      | 17.9   |       |      | 40  |  |
| 45  | 18.4  | 15.7  |      | 18.7  | 15.8  |      | 18.5  |       |      | 18.4  |       |      | 17.9   |       |      | 17.5   |       |      | 45  |  |
| 50  | 17.5  | 14.9  |      | 17.9  | 15.1  |      | 17.9  |       |      | 17.8  |       |      | 17.4   |       |      | 17.2   |       |      | 50  |  |
| 55  | 16.5  | 14.1  |      | 17.2  | 14.4  |      | 17.3  | 14.4  |      | 17.3  | 14.4  |      | 17     |       |      | 16.8   |       |      | 55  |  |
| 60  | 15.6  | 13.3  | 11.3 | 16.4  | 13.7  |      | 16.6  | 13.8  |      | 16.8  | 13.9  |      | 16.6   | 13.8  |      | 16.4   | 13.8  |      | 60  |  |
| 65  | 14.7  | 12.7  | 10.9 | 15.6  | 13.1  | 11   | 16    | 13.3  | 11   | 16.2  | 13.4  |      | 16.1   | 13.4  |      | 16     | 13.3  |      | 65  |  |
| 70  | 13.9  | 12.1  | 10.5 | 14.8  | 12.5  | 10.7 | 15.3  | 12.7  | 10.7 | 15.7  | 12.9  |      | 15.6   | 12.9  |      | 15.6   | 13    |      | 70  |  |
| 75  | 13.1  | 11.6  | 10.3 | 14.1  | 12    | 10.4 | 14.7  | 12.3  | 10.4 | 15.1  | 12.5  | 10.5 | 15.2   | 12.5  | 10.4 | 15.2   | 12.6  |      | 75  |  |
| 80  | 12.4  | 11.1  | 10   | 13.4  | 11.6  | 10.1 | 14    | 11.9  | 10.2 | 14.6  | 12.1  | 10.2 | 14.7   | 12.2  | 10.2 | 14.8   | 12.2  | 10.2 | 80  |  |
| 85  | 11.6  | 10.7  | 9.8  | 12.7  | 11.2  | 9.9  | 13.4  | 11.5  | 10   | 14    | 11.7  | 10.1 | 14.2   | 11.8  | 10.1 | 14.4   | 11.9  | 10   | 85  |  |
| 90  | 10.8  | 10.3  | 9.7  | 12.1  | 10.8  | 9.8  | 12.8  | 11.1  | 9.8  | 13.4  | 11.4  | 9.9  | 13.7   | 11.5  | 9.9  | 14     | 11.6  | 9.9  | 90  |  |
| 95  | 10.1  | 10    | 9.7  | 11.5  | 10.4  | 9.7  | 12.3  | 10.8  | 9.7  | 12.9  | 11.1  | 9.8  | 13.3   | 11.2  | 9.8  | 13.6   | 11.3  | 9.8  | 95  |  |
| 100 | 9.4   | 9.8   | 9.7  | 10.9  | 10.2  | 9.7  | 11.8  | 10.5  | 9.6  | 12.5  | 10.8  | 9.7  | 12.8   | 10.9  | 9.7  | 13.1   | 11.1  | 9.7  | 100 |  |
| 105 | 8.9   | 9.7   |      | 10.2  | 9.9   | 9.7  | 11.3  | 10.2  | 9.6  | 12    | 10.5  | 9.6  | 12.4   | 10.6  | 9.6  | 12.7   | 10.8  | 9.6  | 105 |  |
| 110 |       |       |      | 9.6   | 9.8   | 9.7  | 10.8  | 10    | 9.6  | 11.6  | 10.3  | 9.6  | 12     | 10.4  | 9.5  | 12.4   | 10.6  | 9.5  | 110 |  |
| 115 |       |       |      | 9.2   | 9.7   |      | 10.2  | 9.8   | 9.6  | 11.1  | 10    | 9.6  | 11.6   | 10.2  | 9.5  | 12     | 10.4  | 9.5  | 115 |  |
| 120 |       |       |      | 8.8   | 9.7   |      | 9.7   | 9.7   | 9.6  | 10.7  | 9.9   | 9.6  | 11.2   | 10    | 9.5  | 11.6   | 10.2  | 9.4  | 120 |  |
| 125 |       |       |      |       | 9.3   | 9.6  | 9.6   | 10.3  | 9.7  | 9.6   | 10.9  | 9.9  | 9.5    | 11.3  | 10   | 9.4    |       | 125  |     |  |
| 130 |       |       |      |       |       | 9    | 9.6   |       | 9.8  | 9.6   | 9.6   | 10.5 | 9.7    | 9.5   | 11   | 9.8    | 9.4   |      | 130 |  |
| 135 |       |       |      |       |       | 8.6  | 9.6   |       | 9.4  | 9.6   | 9.6   | 10.1 | 9.6    | 9.5   | 10.7 | 9.7    | 9.4   |      | 135 |  |
| 140 |       |       |      |       |       |      |       |       | 9.1  | 9.6   | 9.6   | 9.8  | 9.5    | 9.5   | 10.4 | 9.6    | 9.4   |      | 140 |  |
| 145 |       |       |      |       |       |      |       |       | 8.8  | 9.6   |       | 9.5  | 9.5    | 9.5   | 10.1 | 9.5    | 9.4   |      | 145 |  |
| 150 |       |       |      |       |       |      |       |       | 8.6  |       |       | 9.2  | 9.5    | 9.5   | 9.8  | 9.5    | 9.4   |      | 150 |  |
| 155 |       |       |      |       |       |      |       |       |      |       |       | 8.9  | 9.2    |       | 9.5  | 9.4    | 9.4   |      | 155 |  |
| 160 |       |       |      |       |       |      |       |       |      |       |       | 8.7  | 9.1    |       | 9.2  | 9.4    | 9.4   |      | 160 |  |
| 165 |       |       |      |       |       |      |       |       |      |       |       |      | 9      | 9.3   | 9.4  |        | 9.4   |      | 165 |  |
| 170 |       |       |      |       |       |      |       |       |      |       |       |      |        | 8.8   | 9.2  |        | 9.4   |      | 170 |  |
| 175 |       |       |      |       |       |      |       |       |      |       |       |      |        | 8.6   | 9.1  |        | 9.4   |      | 175 |  |

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# Lifting capacities

## Forces de levage

**TNZK**

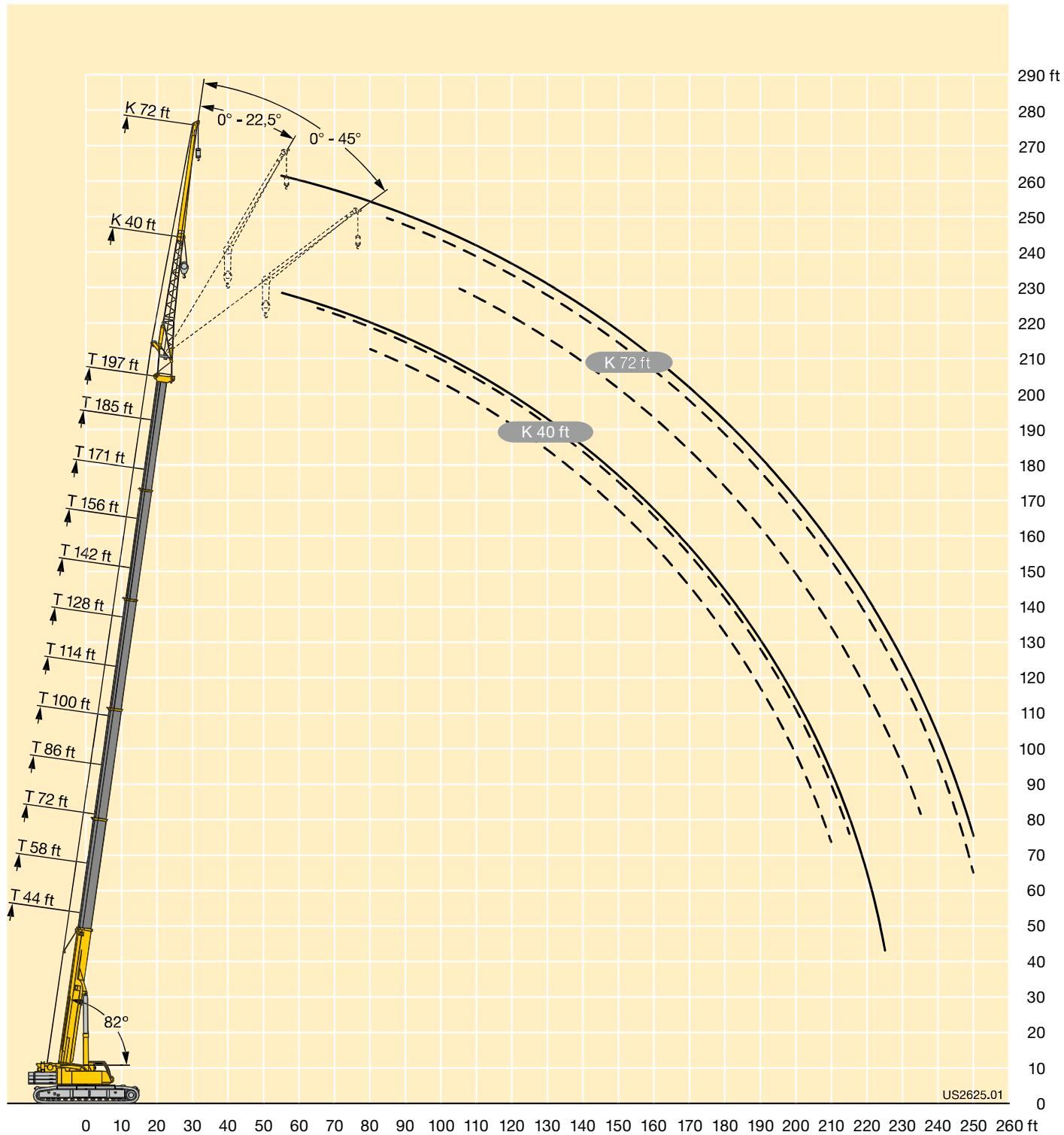


| ft  | 128 ft |       |     | 142 ft |       |      | 156 ft |       |      | 171 ft |       |     | 185 ft |       |     | 197 ft |       |     | ft  |  |
|-----|--------|-------|-----|--------|-------|------|--------|-------|------|--------|-------|-----|--------|-------|-----|--------|-------|-----|-----|--|
|     | 72 ft  |       |     | 72 ft  |       |      | 72 ft  |       |      | 72 ft  |       |     | 72 ft  |       |     | 72 ft  |       |     |     |  |
|     | 0°     | 22.5° | 45° | 0°     | 22.5° | 45°  | 0°     | 22.5° | 45°  | 0°     | 22.5° | 45° | 0°     | 22.5° | 45° | 0°     | 22.5° | 45° |     |  |
| 32  | 17.5   |       |     | 18.2   |       |      |        |       |      |        |       |     |        |       |     |        |       | 32  |     |  |
| 34  | 17.5   |       |     | 18.2   |       |      |        |       |      |        |       |     |        |       |     |        |       | 34  |     |  |
| 36  | 17.4   |       |     | 18.1   |       |      |        |       |      |        |       |     |        |       |     |        |       | 36  |     |  |
| 38  | 17.3   |       |     | 18     |       |      |        |       |      |        |       |     |        |       |     |        |       | 38  |     |  |
| 40  | 17.2   |       |     | 17.9   |       |      | 17.2   |       |      |        |       |     |        |       |     |        |       | 40  |     |  |
| 45  | 16.9   |       |     | 17.6   |       |      | 16.9   |       |      | 15.8   |       |     |        |       |     |        |       | 45  |     |  |
| 50  | 16.6   |       |     | 17.3   |       |      | 16.7   |       |      | 15.6   |       |     |        |       |     |        |       | 50  |     |  |
| 55  | 16.3   |       |     | 17     |       |      | 16.4   |       |      | 15.4   |       |     | 14.1   |       |     | 13     |       | 55  |     |  |
| 60  | 16     |       |     | 16.7   |       |      | 16.2   |       |      | 15.2   |       |     | 13.9   |       |     | 12.8   |       | 60  |     |  |
| 65  | 15.7   | 13.2  |     | 16.4   | 13.7  |      | 15.9   |       |      | 14.9   |       |     | 13.8   |       |     | 12.7   |       | 65  |     |  |
| 70  | 15.3   | 12.8  |     | 16     | 13.3  |      | 15.6   |       |      | 14.7   |       |     | 13.6   |       |     | 12.5   |       | 70  |     |  |
| 75  | 15     | 12.5  |     | 15.7   | 13    |      | 15.3   | 12.8  |      | 14.5   | 12.4  |     | 13.4   |       |     | 12.4   |       | 75  |     |  |
| 80  | 14.6   | 12.2  |     | 15.4   | 12.6  |      | 15     | 12.5  |      | 14.3   | 12.1  |     | 13.2   | 11.5  |     | 12.2   |       | 80  |     |  |
| 85  | 14.3   | 11.9  | 10  | 15     | 12.3  | 10.2 | 14.7   | 12.2  | 10.1 | 14     | 11.8  |     | 13     | 11.3  |     | 12     | 10.8  | 85  |     |  |
| 90  | 13.9   | 11.6  | 9.9 | 14.7   | 12    | 10   | 14.4   | 12    | 10   | 13.7   | 11.6  |     | 12.8   | 11.1  |     | 11.9   | 10.6  | 90  |     |  |
| 95  | 13.6   | 11.3  | 9.8 | 14.3   | 11.8  | 9.9  | 14.1   | 11.7  | 9.8  | 13.5   | 11.4  | 9.7 | 12.6   | 10.9  |     | 11.7   | 10.5  | 95  |     |  |
| 100 | 13.2   | 11.1  | 9.6 | 13.9   | 11.5  | 9.8  | 13.8   | 11.4  | 9.7  | 13.2   | 11.2  | 9.6 | 12.4   | 10.7  | 9.4 | 11.6   | 10.3  | 100 |     |  |
| 105 | 12.8   | 10.8  | 9.6 | 13.6   | 11.3  | 9.7  | 13.4   | 11.2  | 9.6  | 12.9   | 11    | 9.5 | 12.2   | 10.6  | 9.3 | 11.4   | 10.2  | 9.2 | 105 |  |
| 110 | 12.4   | 10.6  | 9.5 | 13.2   | 11    | 9.6  | 13.1   | 11    | 9.5  | 12.7   | 10.8  | 9.4 | 12     | 10.4  | 9.3 | 11.2   | 10    | 9.1 | 110 |  |
| 115 | 12.1   | 10.4  | 9.4 | 12.8   | 10.8  | 9.5  | 12.8   | 10.8  | 9.5  | 12.4   | 10.6  | 9.4 | 11.7   | 10.2  | 9.2 | 11.1   | 9.9   | 9.1 | 115 |  |
| 120 | 11.8   | 10.2  | 9.4 | 12.5   | 10.6  | 9.4  | 12.5   | 10.6  | 9.4  | 12.1   | 10.4  | 9.3 | 11.5   | 10.1  | 9.2 | 10.9   | 9.8   | 9   | 120 |  |
| 125 | 11.5   | 10.1  | 9.4 | 12.2   | 10.4  | 9.4  | 12.2   | 10.4  | 9.3  | 11.9   | 10.3  | 9.3 | 11.3   | 10    | 9.1 | 10.8   | 9.7   | 9   | 125 |  |
| 130 | 11.2   | 9.9   | 9.4 | 11.9   | 10.2  | 9.4  | 11.9   | 10.2  | 9.3  | 11.7   | 10.1  | 9.2 | 11.1   | 9.8   | 9.1 | 10.6   | 9.5   | 9   | 130 |  |
| 135 | 10.9   | 9.8   | 9.4 | 11.6   | 10.1  | 9.3  | 11.7   | 10.1  | 9.3  | 11.4   | 10    | 9.2 | 11     | 9.7   | 9.1 | 10.4   | 9.4   | 8.9 | 135 |  |
| 140 | 10.6   | 9.7   | 9.4 | 11.3   | 9.9   | 9.3  | 11.4   | 9.9   | 9.2  | 11.2   | 9.8   | 9.2 | 10.8   | 9.6   | 9   | 10.2   | 9.3   | 8.9 | 140 |  |
| 145 | 10.3   | 9.6   | 9.4 | 11     | 9.8   | 9.3  | 11.1   | 9.8   | 9.2  | 11     | 9.7   | 9.2 | 10.6   | 9.5   | 9   | 9.9    | 9.3   | 8.9 | 145 |  |
| 150 | 9.9    | 9.5   | 9.4 | 10.8   | 9.6   | 9.3  | 10.9   | 9.7   | 9.2  | 10.8   | 9.6   | 9.2 | 10.4   | 9.4   | 9   | 9.6    | 9.2   | 8.9 | 150 |  |
| 155 | 9.5    | 9.4   | 9.4 | 10.5   | 9.5   | 9.3  | 10.5   | 9.6   | 9.2  | 10.5   | 9.5   | 9.2 | 10.2   | 9.3   | 9   | 9.3    | 9.1   | 8.9 | 155 |  |
| 160 | 9.2    | 9.2   | 9.4 | 10.3   | 9.5   | 9.3  | 10.3   | 9.5   | 9.2  | 10     | 9.4   | 9.2 | 9.9    | 9.3   | 9   | 8.9    | 8.9   | 8.9 | 160 |  |
| 165 | 8.9    | 9     | 9.2 | 10     | 9.4   | 9.3  | 10     | 9.4   | 9.2  | 9.8    | 9.3   | 9.2 | 9.3    | 9.2   | 9   | 8.6    | 8.8   | 8.8 | 165 |  |
| 170 | 8.5    | 8.7   | 8.9 | 9.5    | 9.4   | 9.3  | 9.5    | 9.3   | 9.2  | 9.5    | 9.3   | 9.2 | 8.5    | 9.1   | 9   | 8.1    | 8.6   | 8.7 | 170 |  |
| 175 | 8.2    | 8.4   | 8.6 | 8.8    | 9.3   | 9.3  | 8.7    | 9.3   | 9.2  | 9      | 9.1   | 9.1 | 7.8    | 9.1   | 9   | 7.5    | 8.3   | 8.6 | 175 |  |
| 180 | 8      | 8.1   | 8.5 | 8.6    | 9     | 9.2  | 8.4    | 9     | 9.2  | 8.3    | 9     | 9.1 | 7.1    | 8.5   | 9   | 6.8    | 8.1   | 8.4 | 180 |  |
| 185 | 7.7    | 7.9   |     | 8.3    | 8.4   | 8.7  | 8.1    | 8.4   | 8.8  | 7.6    | 8.7   | 9.1 | 6.4    | 7.8   | 8.6 | 6.1    | 7.6   | 8.1 | 185 |  |
| 190 | 7.5    |       |     | 8.1    | 8.2   | 8.6  | 7.8    | 8     | 8.2  | 7      | 8     | 8.6 | 5.7    | 7     | 7.8 | 5.5    | 6.9   | 7.6 | 190 |  |
| 195 |        |       |     | 7.8    | 7.9   |      | 7.4    | 7.7   | 7.9  | 6.4    | 7.4   | 7.8 | 5.2    | 6.4   | 7   | 4.9    | 6.2   | 7   | 195 |  |
| 200 |        |       |     |        | 7.6   |      | 6.8    | 7.4   | 7.5  | 5.8    | 6.7   | 7   | 4.6    | 5.7   | 6.2 | 4.3    | 5.6   | 6.2 | 200 |  |
| 205 |        |       |     |        | 6.3   |      | 6.3    | 6.8   | 6.7  | 5.3    | 6.1   | 6.3 | 4.1    | 5.1   | 5.5 | 3.8    | 4.9   | 5.5 | 205 |  |
| 210 |        |       |     |        |       | 5.8  | 6.2    |       | 4.8  | 5.5    | 5.6   | 3.6 | 4.5    | 4.9   | 3.3 | 4.3    | 4.9   | 210 |     |  |
| 215 |        |       |     |        |       | 5.3  |        | 4.3   | 4.9  | 4.9    |       | 3.1 | 3.9    | 4.2   | 2.8 | 3.8    | 4.2   | 215 |     |  |
| 220 |        |       |     |        |       | 3.3  |        |       | 3.9  | 4.4    |       | 2.6 | 3.4    | 3.5   | 2.3 | 3.3    | 3.6   | 220 |     |  |
| 225 |        |       |     |        |       |      |        |       | 3.5  | 3.8    |       | 2.2 | 2.9    | 2.9   | 1.9 | 2.8    | 3     | 225 |     |  |
| 230 |        |       |     |        |       |      |        |       |      | 3.1    |       | 1.8 | 2.4    | 2.2   | 1.4 | 2.3    | 2.4   | 230 |     |  |
| 235 |        |       |     |        |       |      |        |       |      |        |       | 1.4 | 1.9    |       | 1.8 | 1.8    | 1.8   | 235 |     |  |

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# Lifting heights Hauteurs de levage

**TNZK**



## Technical description

### Description techniques

#### Crawler travel gear

|                        |   |
|------------------------|---|
| <b>Frame</b>           | Low torsion box construction, consisting of crawler center section, two traverse beams and two crawler carriers. The crawler carriers can be removed from the telescoping traverse beams. Hydraulic track width adjustment.   |
| <b>Tracks</b>          | Maintenance free crawler chassis with 3'3" wide flat crawler pads.  |
| <b>Travel drive</b>    | Per crawler carrier, a hydraulic travel drive consisting of an axial piston motor, planetary gear with spring-loaded hydraulically-releasable travel brake. The crawler chains can be controlled synchronously as well as independently and counter-rotating. Travel speed: 0 – 1.55 mph. |
| <b>Central ballast</b> | 44100 lbs, placement blocks at 22050 lbs each, mounting on crawler center section.  |

#### Crane superstructure

|                       |   |
|-----------------------|---|
| <b>Frame</b>          | Liebherr-manufactured, torsionally rigid steel construction made from high-tensile fine-grain steel. Triple-roller slewing rim.   |
| <b>Crane engine</b>   | Diesel, 4 cylinder, watercooled, make Liebherr, output 230 kW (312 h.p.), max. torque 1062 lbs-ft. Exhaust emissions acc. to (EU) 2016/1628, EPA/CARB or ECE-R.96. Fuel tank capacity: 185 gallons.   |
| <b>Crane drive</b>    | Diesel-hydraulic, with 5 axial piston variable displacement pumps, with servo-control and capacity control, 1 double gear pump. Compact hydraulic drive flanged to the Diesel engine. Drive assembly completely enclosed for noise abatement.                             |
| <b>Control</b>        | Electronic control by the LICCON computer system (PLC control), two self-centering control levers (joy-sticks). Infinitely variable crane motions through displacement control of the hydraulic pump. Additional working speed control by variation of the Diesel engine. |
| <b>Hoist gear</b>     | Axial piston variable displacement motor, Liebherr hoist drum with integrated planetary gear and spring-loaded static brake. Actuation by closed regulated oil circuit.   |
| <b>Luffing gear</b>   | 1 differential ram with nonreturn valve.  |
| <b>Slewing gear</b>   | Axial piston fixed displacement motor, planetary gear, spring-loaded static brake.  |
| <b>Crane cab</b>      | Large screen area, compound glass, comfort furnishing, cabin tilttable 20° to rear.   |
| <b>Safety devices</b> | LICCON2 safe load indicator, test system, hoist limit switches, safety valves against rupture of pipes and hoses.   |

|                          |   |
|--------------------------|---|
| <b>Telescopic boom</b>   | 1 base section and 5 telescopic sections. All telescopic sections extendable individually by means of the rapid-cycle telescoping system Telematik.<br>Boom length 44 ft to 197 ft. |
| <b>Counterweight</b>     | 110250 lbs  |
| <b>Electrical system</b> | Modern data bus technique, 24 Volt DC, 2 batteries of 170 Ah each.  |

#### Additional equipment

|                                    |  |
|------------------------------------|--|
| <b>Swing-away jib K/NZK</b>        | 40 ft – 72 ft long, mountable to the telescopic boom at 0°, 22.5° or 45°. Hydraulic ram for operating the swing-away jib from 0° – 45° (option). |
| <b>Telescopic boom extension V</b> | 23 ft long lattice section, thus 23 ft higher pinning point for swing-away jib.  |
| <b>Intermediate sections</b>       | 2 intermediate sections of 23 ft each for the extension of the biparted swing-away jib to 95 ft or 118 ft.                                       |
| <b>Erection jib HK</b>             | 11 ft  |
| <b>2<sup>nd</sup> hoist gear</b>   | For two-hook operation or for operation with swing-away jib if the hoist rope shall remain reeved.   |
| <b>Additional counterweight</b>    | 2 additional counterweight slabs of 22050 lbs each for a total counterweight of 154350 lbs.  |

Other items of equipment available on request.

## Description of symbols Explication des symboles

### General symbols Symboles généraux

|  |   |  |   |
|--|---|--|---|
|  | Radius<br>Portée  |  | Width crawler chassis<br>Largeur du train de chenilles        |
|  | Boom length<br>Longueur de la flèche                                      |  | Total weight<br>Poids total                                   |
|  | Boom position<br>Position de la flèche                                    |  | Hookblock / Capacity<br>Moufle à crochet / Capacité de charge |
|  | Ground pressure<br>Pression au sol  |  | Hoist gear<br>Treuil de levage                                |
|  | Slewing gear / Working area<br>Mécanisme d'orientation / Plage de travail |  | Crane superstructure<br>Partie tournante de la grue           |
|  | Driving speed<br>Vitesse de translation                                   |  | Standard<br>Norme   |
|  | Counterweight<br>Contrepoids  |  | Gradability<br>Aptitude à gravir les pentes                   |
|  | Central ballast<br>Contrepoids central                                    |  | Driving force<br>Puissance propulsive                         |

### Crane specific symbols Symboles spécifiques à la grue

|  |   |  |   |
|--|---|--|---|
|  | Telescopic boom<br>Flèche télescopique                    |  | Telescopic boom extension<br>Rallonge flèche télescopique |
|  | Hydraulic swing away jib<br>Fléchette pliante hydraulique |  | Erection jib<br>Flechette de montage                      |

### **Remarks referring to load charts**

1. The lifting capacities do not exceed 75 % of the tipping load according to ASME B 30.5.  
The crane's structural steelwork is in accordance with EN 13000 and ASME B 30.5.
2. For the calculation of the load charts at least a wind speed of 30 ft/s (9 m/s, 20.1 mph) and regarding the load a sail area of 1 m<sup>2</sup> per ton load and a wind resistance coefficient of 1.2 on the load have been taken into account. For lifting of loads with large sail areas and/or high wind resistance coefficients the maximum wind speed as stated in the load charts has to be reduced.
3. The lifting capacities stated are valid for lifting operation only (corresponding with crane classification according to ISO 4301-1, crane group A1).
4. Lifting capacities are given in kips.
5. The weight of the hook blocks and hooks is part of the load and therefore it must be deducted from the lifting capacities.
6. Working radii are measured from the slewing centreline.
7. The stated lengths of the telescopic boom are maximum values and may deviate slightly.
8. The lifting capacities given for the telescopic boom only apply if the folding jib is taken off.
9. Subject to modification of lifting capacities.
10. Lifting capacities above 295400 lbs/332900 lbs only with additional pulley block/special equipment.
11. Lateral inclination ± 0.3°.
12. The data of this brochure serves only for general information. All information is provided without warranty. Instructions for the correct commissioning of the crane please take from the operation manual and the load chart book.